

DETERMINANTS OF SAVINGS:- THE CASE OF SAVINGS
AND CREDIT CO-OPERATIVE SOCIETIES IN KENYA.

BY

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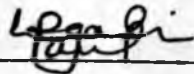
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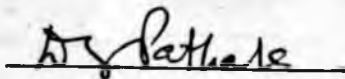


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ABSTRACT

The Co-operative Sector is a very important sector because it provides employment, investment funds and reduces dependence on external financial resources among others. The aim of this study was to identify the determinants of corporate savings in savings and credit co-operative societies (SACCOS) with a view to recommend some policies which can enhance the savings rate in this sector. It was also intended to estimate the demand functions for loans and share capital/deposits in this sector.

Since time-series data exist in a haphazard manner, cross-sectional data was used from fifty SACCOS in Nairobi. In order to eliminate specification and simultaneity biases, simultaneous equation models were used to estimate the intended Savings, Assets, Deposits/Share Capital and Loans functions. From the results, assets, profits, investment undertakings and loans advanced to members were found to be the main determinants of corporate savings in SACCOS. Loans, membership and average monthly contribution per member were the main determinants of Deposits/Share Capital. And finally, Deposits/Share Capital, loan defaults, investment undertakings and loan outstanding were the main determinants of loans advanced to members.

Various policy-implications were recommended all based on these functions and the major determinants of these variables. For example it was recommended that in order to increase deposits, there is need for mass membership drive plus extensive membership education.

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LIST OF ABBREVIATIONS USED IN THE PAPER

1. SACCOS - Savings and Credit Co-operative Societies
2. ICA- International Co-operative Alliance
3. GNP - Gross National Product
4. GDP - Gross Domestic Product
5. MOCD - Ministry of Co-operative Development
6. KFA - Kenya Farmers Association
7. KPCU - Kenya Planters Co-operative Union
8. KUSCCO - Kenya Union of Savings and Credit Co-operative
9. FCS - Farmers' Co-operative Society
10. L.T.D. - Limited

11. ICIPE - International Centre For Insect Physiology and Entomology
12. KCC - Kenya Co-operative Creameries
13. CBK - Co-operative Bank of Kenya
14. KGGU - Kenya Grain Growers Union
15. KNFC - Kenya National Federation of Co-operatives.
16. ACCOSCA - African Confederation of Co-operative Savings and Credit Association
17. KNHC - Kenya National Handicraft Co-operative
18. NACHU - National Housing Co-operative Union
19. KCCU - Kenya Consumers' Co-operative Union
20. NBFIS - Non-Bank Financial Institutions
21. KEI - Kenya Industrial Estates
22. BAT - British American Tobacco
23. LDC's - Less Developed Countries
24. U.S.A(US) - United States of America
25. USSR - Union of Soviet Socialist Republic (Soviet Union)
26. IMF - International Monetary Fund
27. ICDC - Industrial and Commercial Development Corporation
28. SCPs - Studies on Co-operative Papers Presented at the Workshop on the Role of Co-operatives in Development of the Kenyan Economy
29. Dept. - Department of
30. Asst. - Assistant
31. Kshs. - Kenya Shillings
32. e.g. - For example
33. i.e. - That is or in other words
34. pp - Page or pages
35. 2SLS - Two Stage Least Squares

- 36. OLS - Ordinary Least Squares
- 37. ILS - Indirect Least Squares
- 38. Cov - Covariance
- 39. Corr - Correlated to
- 40. DW - Durbin-Watson Statistic
- 41. t-distribution - Student's t-distribution
- 42. SE - Standard Error
- 43. Prof. - Professor

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

Most of the developing countries including Kenya are faced with many Socio-Economic problems such as inefficiency, unemployment, illiteracy, shortage of investment funds due to low savings rate and indebtedness. To alleviate them calls for mobilization of financial resources. The Co-operative sector is one source of mobilising funds besides the Commercial banks and other Non-bank financial institutions. Savings and Credit Co-operative ^{Societies} (SACCOS) have been used to mobilise the needed financial resources. SACCOS are established in order to promote thrift and provide sources of credit at fair rate of interest (Department of Co-operative Development Plan, 1971-74, pp 42). For SACCOS to mobilise savings and meet the country's requirement we need to know the determinants of savings in this sector. This knowledge will assist us in changing the relevant variables in order to attain the level of fund-raising that has been set for this sector. Hence this study is set to determine, establish and evaluate the relevant determinants of savings in this sector.

Co-operation means working together for the benefit of all members. A Co-operative is defined as a voluntary association of persons or institutions working together with the aim of achieving certain common interest or goals (Republic of Kenya, 1987, Dulfer, 1974, Digbey, Plunkett, Horace, Hubert and Hough, 1966, Shri, Mehta and Ouma, 1980). A Saving and Credit Co-operative Society (A SACCO) may be defined as "a Co-operative Savings and Lending Organisation, established by a group of people who have a common bond, for the purpose of promoting thrift and providing themselves with a source of credit at a fair rate of interest" (MOCD Plan, 1971-74). Others define it as "a voluntary association of salaried people who pay fixed subscriptions, at a fixed place, at regular intervals

usually monthly, to fixed sum given to members in rotation"

(Adeyeye, 1978).

Formal Co-operatives originated from Europe. The first society, Rochdale Society of Equitable Pioneers, was formed in England in 1844 by Handloom Weavers. Its main aim was to sell clean and high quality commodities to the members. It was formed under the principles of one man one vote, sale at market price and division of profit among shareholders.

The Co-operative Movement expanded very rapidly due to the formation of the International Co-operative Alliance (ICA) in 1895. This expansion was evidenced in countries like Sweden, Holland, U.S.A., Denmark, Iceland, France, Belgium, Hungary, India, Germany and Italy (Hough, 1966, Ouma, 1980).

African Co-operatives started before Independence but more emphasis was put in them after Independence. French Speaking African Countries had Co-operatives as far back as 1919. In British protectorate they were started around 1932. The development was slow due to lack of qualified staff (Hyden, 1973).

In the earlier stages of Co-operative development, East African countries performed better than most other African countries with respect to number of societies, membership and turnover. However, compared to other countries outside the African Continent, they were not highly ranked. This is illustrated in tables A and B of appendix 1. From table B, we can see that in terms of Co-operative membership as a percentage of total population (1967), Denmark, Canada U.S.S.R. and U.S.A. were top.

SACCOS are just as old as other types of Co-operatives. The first SACCO was formed in Germany in 1846 by Fredrick Wilhelm Raiffeisen and Schulze, "with the aim of introducing self help....." This first SACCO was rural-based and was meant for the poor. Other early SACCOS were formed in Canada (1900), Italy (1864), U.S.A. (1907), India (1895) and Belgium (1848). The early pioneers included people like Alphonse Desjardins (Canada), Luigi Luzzati and Leone Wollenborg (Italy), Felene (U.S.A.), Frederick Nicholson (India) and Francois (Belgium) (Hough, 1966). These early SACCOS were meant to pool together the meager savings, encourage regular savings and lending to members at low interest rates. Infact these objectives have not changed much even today (Ndege, 1979/80).

In Kenya we have very many SACCOS. More details about them will be discussed later in chapter two, together with performance. However, as a way of introduction, we can say that looking at deposits, turnover, membership, numbers and loans, both increasing and decreasing trends can be spotted. The question of why there has been fluctuations and what can be done to improve the situation becomes an issue of concern (see table 11). It can be stressed that SACCOS savings vary from one society to the other. They are never sufficient for the SACCOS intended investment as shown in table C of appendix 1. Hence this study as will be stated much later is set to explain why there is variation across societies, why there exists insufficiency of savings for investment purposes and what can be done to balance them out and/or even to create surplus savings for economic development of Kenya.

For all these objectives set above to be achieved, we need to know the determinants of savings in this sector, a task this study is set to undertake. The presence or absence of a particular factor

identified in any society will explain the variation and/or insufficiency of savings in that society. Knowledge about these determinants will help in drawing up policies aimed at balancing the savings and the investment requirements or even creating excess savings.

Savings defined as "deferred consumption" takes many forms including corporate, public, foreign and personal savings. Though we have many forms of savings, in SACCOS we can only talk of personal and corporate savings. Economic agents save in order to invest and reduce financing investment through external resources or loans (Kenya's Development Plan 1984-88, Hope, Chandarvakar, 1982, Wirmark, 1983). Dividing savings into domestic and foreign, SACCOS savings belong to the former group and the private part of domestic savings. Domestic savings can be classified as government and private savings. Government or public savings is further subdivided into budgetary and government owned enterprises savings. Others have classified savings as voluntary and forced savings, contractual and non-contractual, financial and non-financial. The members savings (deposits) in SACCOS are contractual, voluntary and financial. The SACCOS corporate savings (retained earnings and statutory reserves) are forced, contractual and financial.

The Kenya's national and sectoral savings has not grown sufficiently to finance her investments. Infact the growth rate of gross national savings as a per cent of GNP has been somewhat stagnant despite past policies as shown in table D of appendix 1. The domestic savings at constant 1976 prices has had fluctuating growth. These facts are supported by the tables D and E of appendix 1.

Because of this fluctuating behaviour of savings and the increasing Investment-Savings gap shown in tables D and E in Kenya, it has been everybody's concern to explain why. Infact it has been one of the main

government policy to find out ways and means of stabilizing the fluctuation, closing the gap and if possible to achieve an increasing savings growth rate. Of course this requires knowledge about savings determinants both at national and sectoral level. This study is taking up that challenge at sectoral level (i.e. the SACCOS level) to find out the determinants of savings in SACCOS.

1.2 SCOPE OF THE STUDY

The Co-operative Societies in Kenya are diverse. This study focuses on savings and Credit Co-operative Societies (SACCOS). In SACCOS there exists both corporate and personal savings. However, other forms of savings as indicated earlier include public and foreign. This study mainly focuses on corporate savings and in particular the determinants of corporate savings in Kenya. Hence our units of analysis are Savings and Credit Co-operative Societies. However, in passing, other areas analysed include the determinants of SACCOS loans, deposits and Assets (These are very important aspects in this sector which cannot be left untouched).

This study is handling savings at a sectoral level rather than at national level hence it is a micro-economic analysis. Other related areas which this study has not focused on includes:- other types of Co-operatives e.g. agricultural, building and consumer societies, other types of savings such as public and foreign.

It is also important to note that this study is based on data collected for the financial year ending December 1986. It focuses on one point in time rather than over a long period of time. Hence it cannot be used for analysing problems that spread over a longer period of time. But it is useful for comparing what is happening across societies in the given time period.

1.3 STATEMENT OF THE PROBLEM

As mentioned earlier, savings is important for investment and economic development of a nation. Kenya's data reveals that national and sectoral savings are not sufficient to finance her investment (see tables C and D). The rate of growth of savings as a per cent of GNP at current prices has been somewhat stagnant despite past policies¹ to enhance it. The growth rate of domestic savings has been highly fluctuating. All these assertions are indicated in tables, C, D and E. Because of the increasing investment requirements, the gap has continued to widen as shown in table D, rising from 3 per cent in 1965-69 to 9.5 per cent in 1980-84. Thus the measures to increase savings both at sectoral and national levels remain important and the knowledge of its determinants is called for. The identification of these savings determinants at SACCOS level is the crux of this study. It is noted that savings shortage could be attributed to low government savings. But government activities keep on expanding hence it is difficult to control its expenditures. Of the sources left, corporate savings has received less attention in developing countries due to theoretical (uncertainty) and statistical (lack of data) reasons (Qureshi, 1983). Hence there is need to know the behaviour of the economy and savings at sectoral level e.g. SACCOS.

When a sector grows, its demand for credits increases, the same applies to SACCOS. If SACCOS are to lend more and more, what would be the source of such loans? Given the usual resource constraints, loans demand which is always in excess of loanable funds can only be met if deposits increase at a faster rate or if the propensity to hold deposits is increased and the magnitude of corporate savings raised. This raises the question of, what determines the demand for SACCOS

deposits, loans and savings? It is in this light that the present study is undertaken to identify these factors and test their significance at specified level.

Savings, loans and deposits vary from one society to the other. The question is why that is so. Probably it is because of variation in profits, age, management, membership, total assets or loan defaults. It is also surprising that in certain cases SACCOS with higher profits retain less as compared to those with lower profits. Hence there are other factors other than profits that determine their savings. This study is also set to identify these factors and test their significance. Table C shows a few examples of such SACCOS and their resource deficits.

As was mentioned earlier, looking at SACCOS performance in terms of deposits, turnover, membership, number and loans, we can spot both increasing and decreasing trends. Growth rates are negative in certain items and years. The question of why there has been fluctuations and what can be done to improve the situation becomes an issue of concern. This study is set to try to offer a solution to that problem.

Lastly, it can be argued that if members of SACCOS are not given dividends, there will be no or less motivation to save. And if no sufficient corporate savings is mobilized, it will be difficult to undertake long term investment projects, unless through long-term loans. However, reliance on loans increases indebtedness, dependence, cost of investment undertakings and funds unreliability, hence it should be avoided as much as possible. Thus there is a need to analyse the determinants of savings with a view to boosting national savings in order to avoid external loans and their negative impacts.

Hence in summary, the main research problem is to analyse the determinants of savings and this is a problem because savings are insufficient both at national and sectoral level in Kenya, and because there exist a knowledge gap yet to be filled. It is also noted that corporate savings vary across societies, loanable funds are insufficient in SACCOS thus the need to boost deposits. It is the above mentioned reasons that have prompted the choice of this topic. The tables C, D and E are quite useful in the problem identification, accounting as to how it came to be a problem (its background and development) and verify the choice of the topic.

1.4 OBJECTIVES OF THE STUDY

The main objective of this study is to respond to issues raised in the statement of the problem such as measures to increase savings, closing the Investment-Savings gap, meeting loan requirements in SACCOS and why there is variation of corporate savings across SACCOS. In the process of identifying the factors and formulating the functions, demand functions of SACCOS savings, deposits and loans are derived. Demand functions are quite useful in the process of converting physical resources into financial savings. This further makes this study significant.

Specific Objectives

- (a) Identify determinants of SACCOS savings, deposits and loans and why they vary across societies.
- (b) Formulate, estimate and analyse savings, deposits and loans functions for SACCOS.
- (c) On the basis of (b) to estimate and simulate total savings, deposits and loan potentials of SACCOS.

- (d) Based on results from (a), (b) and (c), suggest policies for enhancing savings mobilization, thus improving SACCOS sector's performance in terms of deposits, turnover, membership, numbers and loans.

1.5 JUSTIFICATION AND SIGNIFICANCE OF THE STUDY

There are several sources or channels of savings in this economy. These include banks, government, foreign sector, insurance companies, non-bank financial institutions and the Co-operative sector. The Co-operative sector plays a very significant role hence studying this sector is justified. Furthermore, the increasing trend of deposits, loans and savings in this sector shows that there is still more potential. The knowledge about savings, deposits and loan functions would give clear picture as to the possible policy measures which can eliminate savings shortages (already identified) in this sector and the economy as a whole. Borrowing will be reduced/prevented in this sector and the whole economy. This study will be of relevance towards proper planning and policy decisions of both the Co-operative and monetary sectors.

Funding SACCOS through deposits only is not sufficient. There is need to raise corporate savings. Study on the above mentioned functions could prevent SACCOS problems such as loan defaults among others, hence improve the sector's performance and contribution to national savings and economic development and growth. Although SACCOS have grown in terms of membership and turnover, research in this area has been limited. The few researches which have been carried out about SACCOS in Kenya have not been substantial as to offer any significant policy implications. Most of them have just been seminar papers and non-empirical studies

whose observations and results are theoretical and not suitable for any test of significance and for simulation purposes.

The results of this study should assist in improving the management of this sector thus reduce the number of dormant and liquidated SACCOS. Table F of appendix 1 illustrates the significance of dormant SACCOS in Kenya between the years 1980 and 1982.

This study is also significant because it will add to knowledge especially with respect to this sector. It will serve as a reference material both for scholars and policy-makers especially those in the Co-operative and monetary sectors as well as those in research institutes and Universities.

1.6 ORGANIZATION OF THE STUDY

This paper is divided into six main chapters. Chapter one briefly introduces the subject matter i.e. the Co-operative Movement in the world and some historical background of this sector. It also summarizes the main focus of this study in the section entitled "scope of the study". The research problem which is the saving deficiency, has been identified and illustrated using data, and some historical trend mentioned in chapter one. Both the objectives of this study and its significance have been covered in this chapter.

Chapter two of this paper looks at the Kenyan Co-operative sector in greater depth. It discusses the historical background of Co-operatives in Kenya, the structure of Co-operatives and the distribution of the societies. It also briefly explains the organization of societies, their past performance, government policies, Co-operative problems and briefly connects the co-operative sector and the Kenyan financial sector.

Chapter three is where literature review is done in order to reveal the kind of reading background and preparation with which the researcher is approaching this paper. It also enlightens the readers on the contributions that have been made by other scholars in the area of Co-operatives, savings and other related areas. Weaknesses and strengths, of these past studies are reviewed briefly on the section entitled "Overview of the Literature".

Chapter four gives the theoretical framework adopted for operationalizing this subject. It also gives a background to the determinants of savings used and the hypotheses set thereafter. Past methodologies are reviewed here. Assumptions made are revealed in this chapter, and lastly the models to be estimated and used for simulation purposes are specified. Brief discussion on the data, and the sampling method used has also been carried out in this chapter.

Chapter five gives the results of the research and the analysis thereafter. It briefly explains the achievement of the objectives set earlier. And any test of significance is carried out in this chapter. This is the core of this study and the information in this chapter is the one that will be most useful to the policy-makers and any other further researches in this area. It also carries the responses to the hypotheses set earlier in chapter four.

The final chapter gives the summary of this study. It summarises what we wanted to do, how we did it and what we found out. It gives some suggestions in the line of policies and their implications. Also discussed here briefly are the limitations of this study and the recommended areas for further research.

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Note

1. For those policies refer to chapter two, section 2.7.

CHAPTER TWO: THE KENYAN CO-OPERATIVE SECTOR

2.1 INTRODUCTION

The Co-operative sector plays a very vital role in the Kenyan economy. It contributes to various aspects of her economic development. This contribution has grown over time hence attracting the attention of very many scholars, researchers and policy-makers. The Co-operative Movement contributes to national income, employment creation, capital formation, marketing of products, increasing the farm revenue, increasing domestic savings and credit supply. This study focuses mainly on the last two i.e. domestic savings and credit supply. Currently the sector contributes 45 per cent of the gross domestic product (GNP) and 30 per cent of the total national investment. It accounts for about 30 per cent of the total investment undertaken by the private sector. These investments are in the form of residential houses and other form of buildings like office blocks and warehouses, factories and office equipments. About 50 per cent of the total Kenyan population depends on the Co-operative Movement, (both directly and indirectly) assuming a family of six and that the average Co-operative member is a head of a household (MOCD, 1987).

In terms of employment, the movement currently employs about 50,000 people, ranging from managers, clerks to manual workers. About 15 per cent of the total commercial bank credit is lent to this sector. Hence it directly maintains commercial banks in business because they (banks) generate funds from the Co-operatives in the form of interest payments. As mentioned earlier, the Co-operatives Movement plays a very important role in the marketing of products e.g. crops and livestock products like milk, cheese etc. For example, in 1984, 60 per cent of coffee and 72 per cent of dairy products were marketed by

the Co-operatives. In the same year, 1309 out of 3500 active Co-operatives had marketing and primary processing of agricultural produce as their major functions. The movement also contributes to the gross farm revenue of major crops as shown below:-

Table 1: Contribution of Co-operatives to Gross Farm Revenue of some major crops, 1987

Product	Percentage
Cotton	95
Pyrethrum	90
Dairy Products	76
Coffee	70
Sugar Cane	48
Sisal	2
Cereals,	1
Livestock	0.2
Poultry	3.4

Source: MOCD, (1987) and Mshiriki Wa Kenya, (1987)

Today SACCOS account for about 11 per cent of the Co-operative Movement turnover and that is about 5 per cent of the national GDP. The SACCOS also account for about 10.6 per cent of the national total credits given out to various recipients. They contribute substantially to the domestic savings (25.2 per cent). The SACCOS contribute about 18.5 per cent of the financial sector savings. These contributions have been growing over time. This means that the sector still has a lot of potential for growth. SACCOS play both financial and non-financial roles. They assist the bank and non-banking financial institutions in the provision of financial resources for economic development. Their objectives include:-

- (a) Provision of investment funds,

- (b) Determining investment portfolio of their resources through elected leaders,
- (c) Training members on simple monetary principles, and
- (d) Fair distribution of surplus profits (MOCD, 1985).

2.2 HISTORICAL BACKGROUND OF CO-OPERATIVES IN KENYA

Kenya's Co-operative movement dates back to 1908 when the first one was started by European Farmers in Lumbwa with the aim of marketing their produce and provision of farm inputs. Before 1930, most of the Co-operative Societies in Kenya were European oriented and controlled. Africans started their Co-operative Societies after early 1930's e.g. KFA (1931) and KPCU (1937), whose impact was never felt until after Independence when they effectively began to play their role of mobilising and raising funds for businesses (Ouma, 1980). Africans formed Co-operative Societies because they felt they were being exploited by Asian traders. African Co-operatives were needed because of:-

- (i) The communal character of african society i.e. high dependence on each other,
- (ii) Need for capital formation to uplift their standard of living,
- (iii) Integration of peasants into monetary economy, and
- (iv) Promotion of mass participation in development (Hyden, 1973, pp 3).

After Independence Co-operative Movement was seen by the government as a vehicle for introducing African Socialism and strengthening heritage, a necessity at that time (Republic of Kenya 1965).

Campbell report of 1930 led to the Co-operative Societies ordinances of 1932 and 1945 and also to the establishment of East African School of Co-operatives in 1952 in Nairobi, subsequently the

Co-operative College in Karen, Nairobi. Infact it is these ordinances that strengthened the movement among Africans. In 1946, the department of Co-operatives was established in the public service and the mother ministry was subsequently started in 1974. All these establishments strengthened the movement even further. The table below shows the number of Co-operative Societies in the early years of the movement's development.

Table 2: Registration and Liquidation of Co-operative

Societies in Kenya, 1932 - 1970

Period	Registration	Liquidation	Still in Register
1932 - 50	258	183	75
1951 - 59	511	168	343
1960 - 64	647	69	582
1965 - 69	478	29	448
Total	1894	445	1445

Source:- Hyden (1973), Republic of Kenya (1965), and Goran (1978/79).

Kenya's Savings and Credit Co-operative Societies (SACCOS) started after Independence and the first one was registered in 1964. But before Independence there existed thrift societies which were run entirely on profit-making motive as the major objective. After the registration of this first SACCO in 1964, a promotion committee was formed in 1967. The first societies were Mwea Tabere and Uya of Mbitini Machakos. In order to promote SACCOS, several conferences were held and participants included government officials, Catholic Missionaries and other interested parties. These earlier SACCOS were on either residential or tribal bond basis, and therefore faced several problems:-

- (a) Liquidity problem due to the poor management and lack of qualified staff,
- (b) Irregular contribution by members due to little and unreliable income,
- (c) Tribal sentiments, and
- (d) Loan defaults by members.

Because of the above mentioned problems, most of these SACCOS became dormant. Others were liquidated and were later replaced with those of either common employers or the professionally based societies (Refer to table 2) (Mwarania 1986, Ndege, 1979/80 and Ouma, 1980).

Felene of U.S.A. established a credit union national association in that country in 1934 with the aim of promoting credit unions or SACCOS world-widely. Kenya got its share of help from this union through her national body, Kenya Union of Savings and Credit Co-operative (KUSCCO) which was registered in 1973. Kenya also emulated the Indian style in the development and shaping of its SACCOS (Mutugu, (1986). These earlier SACCOS were also guided by the same Co-operative principles summarized by Ouma, 1980 as:-

- (a) Open and voluntary membership,
- (b) Democratic administration i.e. elected officials,
- (c) Interest on capital (In case of SACCOS, members get dividends on deposits and interest on share capital),
- (d) Mobilisation and disposal of surplus funds and produce respectively, and
- (e) Education and Co-operation with other Co-operatives.

Though the Co-operative Movement in Kenya has maintained the same principles proposed by the early Co-operators, its structure has changed. Today we have very many different types of Co-operatives which did not exist before. Some special Co-operatives have also come up e.g. Kazi,

Jua-Kali and the school children co-operatives. The latest development is the co-operatives for the informal sector. The basic objectives have remained the same but specific objectives have been modified now and again to suit the type of co-operative formed. For the credit unions, most scholars look at the early thrift societies as the early forms of SACCOS and then the current ones as a modification of the later. Hence the Kenyan SACCOS Movement has passed through two phases i.e. thrift societies, then to SACCOS. Of course as mentioned earlier, the objectives have been modified from profit-making as in case of thrift societies to non-profit making i.e. only savings mobilisation and loan supply as in case of current SACCOS.

2.3: STRUCTURE OF CO-OPERATIVES IN KENYA

2.3.1 TYPES

The co-operatives may be grouped as Agricultural and Non-agricultural. The agricultural co-operatives handle the agricultural and livestock products. Their functions include collection, primary processing and sale of the agricultural products. They may also give short-term loans to the farmers. Examples of agricultural co-operatives include coffee, cotton and pyrethrum co-operative societies. Actual examples of agricultural co-operatives include:- Turkana Fisheries, Nithi Timber Society, Othaya F.C.S. Ltd. and Matungulu F.C.S. Ltd. The non-agricultural co-operative societies handle non-agricultural problems. As mentioned earlier their objectives differ and their area of operation or jurisdiction also differ. The non-agricultural co-operatives include:- SACCOS, Building Societies, Kazi, Housing Co-operatives, Handicraft Co-operatives and the Jua-Kali Co-operatives. Other more actual examples of SACCOS include:- Kenya Police, Posta, Reli, Kenya Bankers, Mombasa Port and Wanandeg. For more examples see appendix 2.

Others have viewed the co-operative movement as consisting of consumer, producer, marketing, insurance and savings and credit co-operative societies. The consumer Co-operative Societies are meant to ensure that consumers get high quality products at fair prices and when they need them. They protect unnecessary hoarding of products and later sell at exploitative prices. The producer co-operative societies act on behalf of producers with respect to sale price and any financial assistance. Marketing Co-operative Societies act on behalf of the producers to ensure fair prices which can keep them in business. Insurance Co-operative Societies ensure that insurance services are provided both for consumers and producers.

The other classification of Co-operative Movement is in terms of credit and non-credit societies. Credit Societies have "the supply of credits to the members at minimum interest rate" as their principal aim e.g. SACCOS. The non-credit societies do not supply credits to the members but may deal in activities such as sale of produce, semi-processing of produce and auditing of books of accounts e.g. KUSCCO. According to Sessional Paper number four of 1987, the movement can be structured into informal sector, Kazi, Agricultural, Commodities, Fisheries, Consumer, Formal Sector and School Children Co-operatives. Hyden (1973) divides the co-operative movement into nation-wide, African smallholder peasants and Apex Co-operatives. However, that kind of division no longer holds.

The Savings and Credit Co-operative Societies (SACCOS) may also be classified in terms of sectors from which they draw their members. Those that draw members from the government ministries, parastatals and statutory institutions (e.g. Chuna) are public owned, although their operations and activities belong to the private sector. Examples

include Harambee (mainly Office of the President employees), Posta (Kenya Posts and Telecommunication Corporation), Reli (Kenya Railways Corporation) and Hazina (Ministries of Planning and Finance). Those that draw their membership from the private firms and institutions include Tembo (East African and Kenya Breweries), Dudu (ICIPE) and Tiger (Tiger Shoes Company). This classification is only relevant to membership but their activities remain private. SACCOS employees are privately employed hence they are not civil or public servants except the seconded government officers. Another classification of SACCOS can be Rural and Urban. There are some which belong to the employees of the rural areas only, while there are others that belong to the employees of the urban centres only. But Urban SACCOS are the majority.

We may also talk of Country-Wide Versus Non-Country-Wide. This kind of SACCOS has country-wide branches, both in the rural and urban centres e.g. Harambee, Afya and Ufundi SACCOS. Even the co-operative movement may likewise be dividend into rural and urban co-operative societies. Most of the rural co-operative societies are agricultural while the urban societies are dominated by SACCOS, consumers and producers societies.

Table 3 shows some data on the classifications discussed above.

Agritultural societies dorminate in membership while SACCOS in numbers.

Table 3:- Types of Co-operative Societies and membership as found in Kenya by 1985

Type	Number of Active Societies	Membership
Coffee	175	451,726
Sisal	1	3,145
Pyrethrum	59	77,787
Sugar-Cane	71	1,548
Cotton	54	124,686

Cereals	55	9,223
Dairy	109	75,133
Livestock	9	394
Poultry	22	843
SACCOS	927	484,068
Others	704	552,190

Source: Kenya Co-operative News, MOCD, February 1986

2.3.2: OBJECTIVES OF THE CO-OPERATIVE SOCIETIES

The objectives of the co-operative societies vary, depending on the type of the society. They range from sale of produce incase of agricultural co-operatives to mobilization of funds incase of SACCOS. Since this paper focuses on SACCOS, more emphasis will be given to SACCOS objectives in this section. SACCOS play both financial and non-financial role in the process of enhancing the country's economic development. They assist the banking and non-banking financial institutions in the provision of financial resources. Others see SACCOS as competitors to the financial institutions with respect to deposits and loans. It is stressed that if the bulk of loans is meant for capital formation then SACCOS impact will be greater (Mwarania and Mutugu, 1986).

Various SACCOS objectives have been identified in government and non-government publications. According to MOCD/ORG/7/55/25TH NOVEMBER, 1985, and Sessional Paper Number 4, 1987 the objectives are:-

- (a) Promotion of thrift and provision of investment funds
thus reduction in external borrowing or reliance,
- (b) Provision of savings and loan services or facilities,
- (c) Provision of security and protection to members funds,

- (d) Through elected leaders, members can determine the investment portfolio of SACCOS' resources,
- (e) training members on some basic monetary and investment principles, and
- (f) the issue of distribution of surplus profit.

In the process of trying to achieve these objectives, SACCOS affect production, transform and distribute risks thus stabilize the economy.

The MOCD paper of 1987 entitled "The Indigenisation of the National Economy Through Co-operatives" identifies them as:-

- (a) Indigenization of the economy,
- (b) Contribution to GDP,
- (c) Employment creation,
- (d) Provision of basic needs,
- (e) Monetization of the economy,
- (f) Patriotism installation,
- (g) Source of government tax revenue, and
- (h) Facilitating the informal sector activities.

The table below shows how far the SACCOS have gone in achieving some of these objectives e.g. loan provision and savings mobilization. Both have had an increasing trend.

Table 4:- SACCOS - Number, membership and loans

Year	Number	Share Capital Kshs. Millions	Loans to Members Kshs. Millions
1971	129	8	5
1975	230	118	92
1980	731	899	724
1984	1158	3300	2700

Source: MOCD, 1987

2.4: OPERATION AND ORGANIZATION STRUCTURE

2.4.1 OPERATION

The Savings and Credit Co-operative Societies do not operate exactly as other financial institutions even though they may be said to be apart of our financial system. They recruit their members discriminatively. For example, for one to be a member of a certain society, one must be an employee of the mother organization i.e. a ministry, a parastatal body or an institution. For example, one cannot be a member of CHUNA unless one works with the University of Nairobi. Such kind of restriction is absent in other financial institutions. Once one is accepted as a member, one completes a form where one declares how much contribution he is going to make monthly (see appendix 5). This amount stands and it is collected through check-off system until one completes another form of either changing the amount or withdrawing from being a member (see appendix 6). When one withdraws, he is refunded his/her contribution plus any interest that might have accrued from it. Membership is optional but the contribution is contractual and compulsory once the form is signed hence one cannot skip the payment, and this is further ensured through the check-off system. However, before the check-off system was introduced non-payment of the contribution used to be a very serious problem in SACCOS. Today it is the non-submission of funds by employers to the respective SACCOS that is the problem (see table 15).

Since one of the main objectives of SACCOS is the supply of credits, it is fair to discuss how this is carried out at this juncture. Once a member has stayed with a SACCO for at least six months, he/she can take a loan. But the loan must not be more than four times his/her

total deposits. Conditions for getting a loan include:-

- (i) The presence of guarantors who may pay the loan incase of default (whose deposits plus the loanee's must not be less than the loan applied for),
- (ii) One must not have another loan of the same type outstanding,
- (iii) The repayment amount must not exceed two thirds of one's salary (income), and,
- (iv) Repayment period must not exceed four years.

(For more information regarding loans see appendix 7). But despite all these conditions loan defaults are still prevalent in societies (see table 14). This is because some of these conditions are usually floated depending on how influential the member who is asking for loan is in the society.

SACCOS generate incomes from interest charged on loans, shares bought, deposits with banks and other physical assets owned, such as buildings, plots, hotels and processing plants in some few cases (see appendix 8). But before retaining earnings, SACCOS must keep 25 per cent of their net profits as statutory reserve, meant for liquidity requirements, liquidation, security and long-term investments. To motivate members they usually pay dividends and interest from the profits made. One can either take the cash or leave it with the society who will convert it into shares. The dividends are paid annually depending on whether the SACCO has made profits or not, and it is calculated on the basis of shares one owns. SACCOS income statement comprises the appropriation account and the balance sheet. The former shows net distributoin surplus for the year, previous year, tax, dividend, interest on deposits, committee honoraria, reserves and retained earnings. The balance sheet shows the assets, liabilities and how they are financed. Assets include fixed, current and loans to members. Financing is done through share capital, deposits, reserves and retained earnings (see appendix 8).

Normally the SACCOS are run by privately employed people. The Managers, the Accountants and other members of staff are recruited by a committee. This committee is democratically elected during a general meeting where all members are present or represented. The committee consists of, the Chairman, Vice-Chairman, the Secretary, Vice-Secretary, the Treasurer, and others members. The committee has the responsibility of supervising the management, deciding on the investment undertakings of the SACCOS and other relevant decision-making activities. The members of the committee normally consist of people who are members of the SACCOS hence employees of the mother organization except the manager of the SACCOS in some cases.

2.4.2: ORGANIZATION OF THE CO-OPERATIVE MOVEMENT

The Co-operative Movement is organised in such a way that we start from the primary societies, the secondary societies (unions), the countrywide societies, the national apex body, the continental regional body and the international body. Primary societies are those whose membership is restricted to individual members. A group of people or companies are not allowed to buy shares from primary societies. That kind of grouping enables members to realise economies of scale because they share costs e.g. transportation and auditing costs. Secondary societies or the district unions have membership normally restricted to primary co-operative societies. The government normally encourage primary societies to affiliate themselves to the district co-operative unions. But still there exists some societies not affiliated to the district unions as shown in figure 1 below. Examples of secondary societies include KUSCCO, Murang'a Union, Inoi F.C.S. Union, Meru Central Union, Kisii Union, Kilifi Union, Meru South F.C.U and Bungoma Union among others.

The countrywide co-operative unions act as umbrellas for all the district unions handling a particular commodity. Examples of countrywide co-operatives are Kenya Co-operative Creameries (KCC), Co-operative Bank of Kenya (CBK), the Kenya Grain Grocers Union (KGGU) and the Kenya Union of Savings and Credit Co-operative (KUSCCO). The national apex body houses all the co-operative societies e.g. the Kenya National Federation of Co-operatives (KNFC). KNFC is in turn affiliated to the continental body, the International Co-operative Alliance (Regional), which is a representative of the world body. In the case of SACCOS, the primary SACCOS are members of KUSCCO, which is in turn affiliated to KNFC and the African Confederation of Co-operatives Savings and Credit Association (ACCOSCA), and the rest of the organisation structure is as shown in figures 1 and 2. Hence in summary, the SACCOS are also organised in terms of primary, secondary, national apex body, continental and the International body. Such kind of affiliation and organisation reduces the cost of operation, spread the risks and thus promote SACCOS by making them more profitable and less fragile in existence and handling members funds.

As a way of emphasis, the Kenya Union of Savings and Credit Co-operatives (KUSCCO) was formed and registered in 1973. It was formed in order to provide the following services:-

- 1) Dissemination of information related to SACCOS,
- 2) Maintaining uniformity in book keeping,
- 3) Improving management of SACCOS,
- 4) Fostering education and training,
- 5) Establishing and enforcing code of ethics and practices and funds interlending among and between SACCOS, and,
- 6) Liaising with MOCD on behalf of SACCOS and providing stationary, legal and data processing services (MOCD, 1987).

FIGURE 1

STRUCTURE OF CO-OPERATIVE
MOVEMENT IN KENYA
FROM PRIMARY SOCIETIES
TO THE APEX ORGANISATION
AND INTERNATIONAL LEVEL

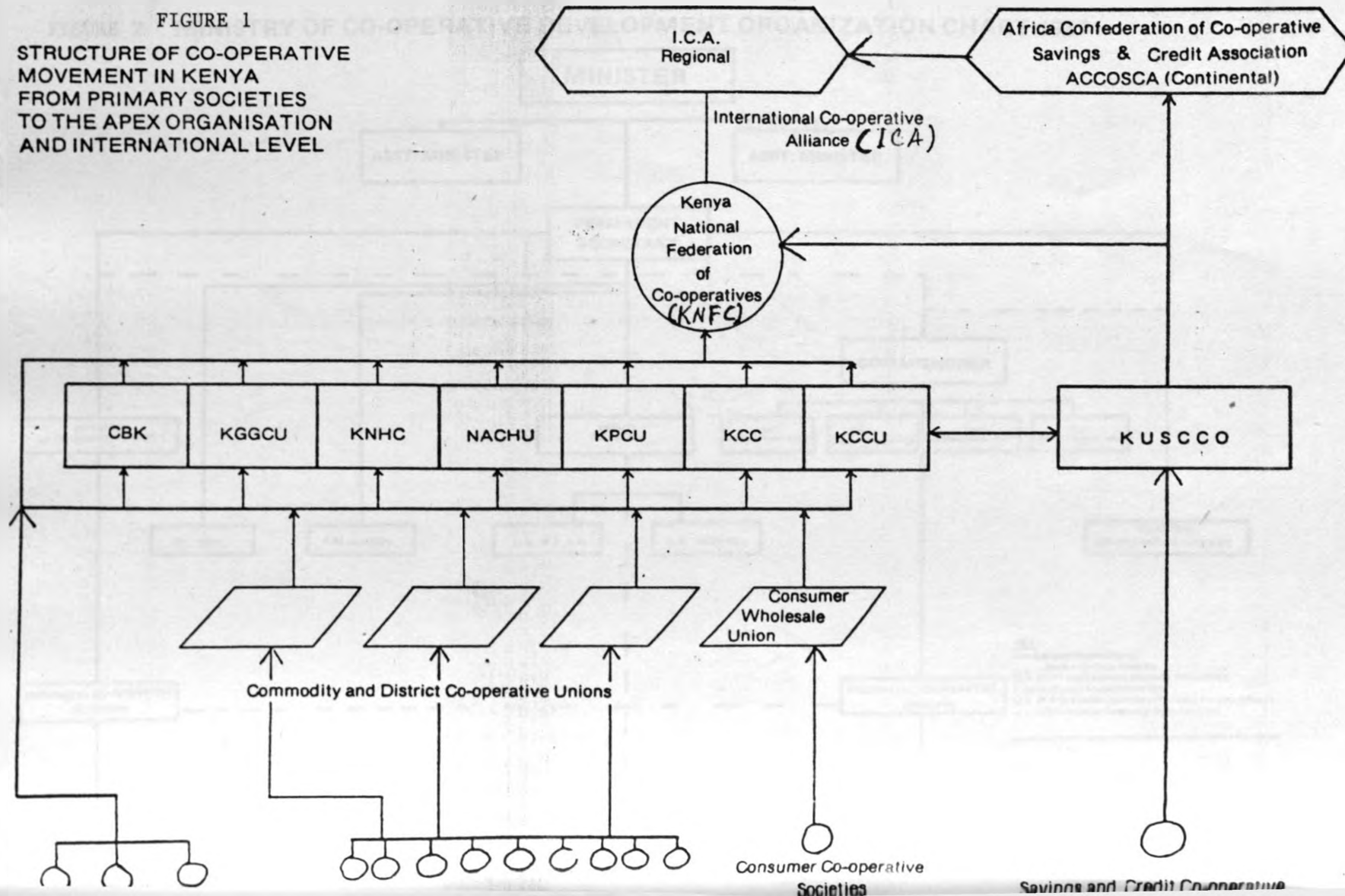
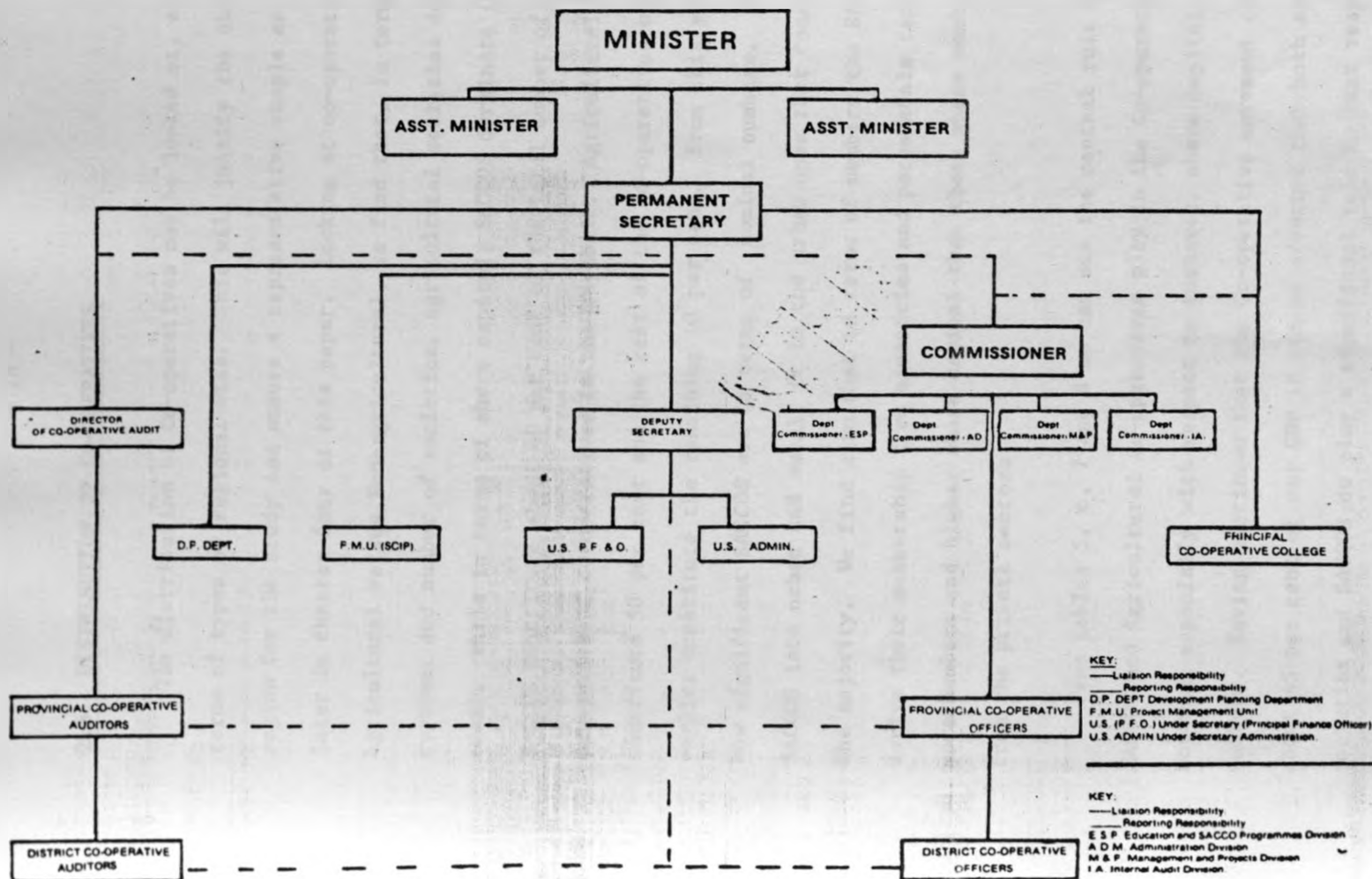


FIGURE 2 MINISTRY OF CO-OPERATIVE DEVELOPMENT ORGANIZATION CHART 1987



2.5: DISTRIBUTION OF CO-OPERATIVES

The distribution of Co-operatives may be looked at, either in terms of types or regional-wise. This will justify the choice of a region for the study and ensure a representative sample as discussed later in chapter four of this paper. Looking at co-operatives as Agricultural versus Non-agricultural, we find that, in terms of turnover and number of societies, agricultural societies dominate (84%). While in terms of share capital, SACCOS dominate (95%). SACCOS constitute about 40 per cent of the total number of all categories of co-operatives in the republic. Agricultural co-operatives constitute 50 per cent and the rest of the co-operatives mentioned earlier constitute the remaining 10 per cent. From this you can see how significant SACCOS are in terms of nominal numbers. Dividing SACCOS into urban and rural, it is the urban ones that constitute the majority. We find also that in terms of members the SACCOS who derive their membership from ministries and parastatals tend to have more members and higher share capital than those whose members come from the private sectors.

From tables 5, 6, 7 and 8 we can see the central role that both SACCOS and Agricultural Co-operatives play in the Co-operative Movement especially with respect to turnover, share capital and numbers. Having mentioned that the Co-operative movement contribute about 45 per cent of our GDP it can be asserted that both agricultural societies and SACCOS do play a significant role in that respect.

Table 5: Number of Co-operative Societies and Unions by type, 1979-86

Year	Type				
	Agricultural	SACCOS	Others	Unions	Total
1979	1,264	683	352	54	2353
1980	1,370	787	257	53	2487
1981	1,316	797	263	48	2424
1982	1,222	928	454	48	2652
1983	1,471	1088	279	63	2901
1984	1,515	1187	299	63	3064
1985	1,557	1352	340	65	3314
1986	1,619	1462	377	66	3524

Source: Economic Survey (various)

Table 6: Turnover, 1979-1981 (Kshs. Millions)

Type	1979	1980	1981
Agricultural	1461	1,876	2055
SACCOS	17	59	76
Others	50	43	78
Unions	146	277	331
Total	1,674	2,255	2,540

Source: Economic Survey, 1982

Table 7: Share Capital, 1980-81, Kshs. Million

Type	1980	1981
Agricultural	183	208
SACCOS	877	1167
Others	16	57
Unions	40	46
Total	1,116	1,478

Source: Economic Survey, 1982

Table 8: Turnover (Percentage Share in Total)

Year	SACCOS	Agricultural	Others	Total
1980	3	83	14	100
1981	3	81	16	100
1982	9	79	12	100
1983	8	79	13	100
1984	9	78	13	100
1985	10	79	11	100

Source: Economic Survey (various)

In terms of regional distribution of SACCOS we find that Nairobi Province contribute 50 per cent of all SACCOS in the country. Nairobi Province SACCOS is 20 per cent of Co-operatives of all categories in the republic. It is also noted that 84 per cent of Co-operative Societies in Nairobi are SACCOS. Hence it is not wrong to conclude that Nairobi is the best region to focus on when it comes to any study on SACCOS. Other provinces which rank second and third are Rift Valley (15.6 per cent) and Coast (12.5 per cent) respectively. The table (9) below shows the regional distribution of SACCOS. Relating the tables 5, 6, 7, 8 and 9 we can conclude that the contribution of Nairobi Province to the National GDP emanating from SACCOS is quite significant. Hence any policy recommendations focusing on Nairobi Province SACCOS will increase her significance and reinforce her superiority in this sector and the contribution of SACCOS in general. But it should be noted that this high contribution is due to the high concentration of organizations in Nairobi, where the needed infrastructure are.

Table 9: Provincial totals and distribution of SACCOS, May 1986

Province	Number	Share (%)
Central	129	9.54
Coast	169	12.50
Eastern	50	3.70
Nairobi	683	50.50
North Eastern	6	0.44
Nyanza	65	4.88
Rift Valley	211	15.60
Western	39	2.90
Total	1,352	100.00

Source: Mungai, 1986

2.6: PERFORMANCE AND CONTRIBUTION OF THE CO-OPERATIVE SECTOR

As pointed out earlier, the co-operative sector plays a very important role in the Kenyan economy. Its contribution has been growing over time. The number of co-operatives since 1977 has always had an upward growth except for 1978 and 1981. The number has more than doubled, standing at 3524 in 1986 as compared to 1437 in 1977. The turnover has less than doubled and realised negative growth rates in years 1978, 1979 and 1983. The turnover was 3106 million Kshs. in 1977 but rose to 6,000 millions Kshs. in 1986. The membership has also had an upward trend, standing at 976,454 in 1977 and more than doubled to 2,000,000 in 1986. But despite these growths, the sector has had reduction in its growth rates hence it has not been a smooth transition. These assertions are shown below in table 10.

Table 10: Number of Co-operative Societies, Turnover (Kshs. Millions)
and membership in Kenya, 1977-1986.

Year	Number (GR)	Turnover (GR)	Membership (GR)
1977	1437 -	3106 -	976,454 -
1978	1401 (-2.5)	1754 (-43.5)	928,925 (-4.9)
1979	2353 (68.0)	1674 (- 4.6)	- -
1980	2467 (4.8)	2255 (34.7)	1,486,395 (60.0)*
1981	2424 (-1.7)	2540 (12.6)	1,619,618 (9.0)
1982	2652 (9.4)	3674 (44.6)	1,557,000 (-3.9)
1983	2901 (9.3)	3054 (-16.9)	1,721,000 (10.5)
1984	3064 (5.6)	3722 (21.9)	1,848,000 (7.4)
1985	3314 (8.2)	4634 (24.5)	1,931,000 (4.5)
1986	3524 (6.3)	6000 (29.5)	2,000,000 (3.6)

* _ The rate is calculated over two years.

Source: Economic Survey and Development Plan (various).

From table 10, the growth rates of the number of Co-operatives if drawn on a graph, we notice a reduction in the fluctuations. The wide fluctuations in the 1970's are evening out in 1980's hence growth rate stability is being achieved in this sector. The same kind of behaviour is also realised in the case of turnover, but the trend does not look as promising as that of the number of societies. The fluctuations also seem to iron out in the growth rates of membership thus taking a positive trend in 1980's.

Narrowing down to SACCOS, their performance in terms of deposits, turnover, membership, loans and numbers has also had fluctuations. We can notice both increasing and decreasing trends in all these aspects

mentioned above. It becomes even more interesting if we compare these aspects in SACCOS vis-a-vis banks and Non-bank financial institutions (NBFI'S) as shown in tables 11 and 12. From these tables we can notice that the amount of loans given to members tend to grow faster in SACCOS than in Banks and NBFIS. This is probably because they charge lower interest rate. It is also interesting to note that the growth rate of deposits in SACCOS has also been higher than those of banks and NBFI'S. However, the growth rates of deposits in NBFI'S has been higher than those of the banks but nearer to those of the SACCOS. This kind of trend could confirm the argument that most economists have put forward, that SACCOS and other financial institutions compete for deposits. Because of promising cheap loans, depositors tend to favour SACCOS. But the NBFI'S have had a tremendous growth because of intensive advertisement of their services. Infact NBFI's charge the highest interest rates on loans even though they seem to be doing well. The question that arises is why that is so? However, no attempt has been made to answer it in this paper.

A good performance by a sector will increase its contribution to the national economy. As mentioned in chapter one, the contribution of the co-operative sector in general has been increasing despite the fluctuations. The same apply to SACCOS. This contribution should be looked at in terms of GDP, employment, investment and savings and how it has continuously risen over time.

Table 11: Number, Turnover, Share Capital, Membership and Loans of SACCOS in Kenya, 1970-1986

Year	Number (GR)		Turnover (GR) Kshs. Million		Share Capital (GR) Kshs. Million		Membership (GR)		Loans given out (GR) Kshs. Million	
1970	115	-	-	-	4.9	-	23,068	-	2.6	-
1971	129	(12.2)	0.26	-	8	(63.3)	30,000*	(30.1)	5.8	(123.1)
1972	101	(-21.7)	0.75	(18.8)	16.2	(102.5)	36,000	(20.0)	14	(141.4)
1973	200*	(98)	-	-	25*	(54.3)	100,000*	(177.8)	-	-
1974	225*	12.5	-	-	40	(60)	150,000	(133.3)	-	-
1975	230	(2.2)	-	-	118	(1.95)	-	-	92	[(557.1)]
1976	-	-	-	-	-	-	-	-	-	-
1977	476	[(107.0)]	44.2	-	260	[(120.3)]	192,755	[(28.5)]	-	-
1978	630	(32.4)	21.5	(-51.4)	375	(44.2)	387,519	(101.0)	210	[(128.3)]
1979	683	(8.4)	17	(-20.9)	536	(42.9)	445,647	(15.0)	-	-
1980	787	(15.2)	59	(247.1)	877*	(63.6)	457,688	(2.7)	724	[(244.8)]
1981	797	(1.3)	76	(28.8)	1167*	(33.1)	526,317	(15.0)	-	-
1982	927	(17.6)	327	(330.3)	1500	(28.5)	484,068	(-8.0)	1300	[(79.6)]
1983	1088	(17.4)	236	(-27.8)	2126	(41.7)	518,000	(7.0)	-	-
1984	1187	(9.1)	348	(47.5)	2597	(22.2)	598,000	(15.4)	2700	[(107.7)]
1985	1352	(13.9)	446	(28.2)	4444	(41.6)	613,000	(2.5)	-	-
1986	1462	(8.1)	664.5	(49.0)	6890	(55.0)	636,468	(3.8)	-	-

Source: Economic Survey, Statistical Abstract and Central Bank Quarterly Economic Review (various) (GR) - Growth rate, [(GR)] - Growth rate calculated over more than one year.

* Some sources give different values.

**Table 12: Loans, Advances and Deposits of the Commercial Banks
and Non-bank Financial Institutions (NBFI'S), 1970-1986,(Kshs. Millions)**

Year	<u>Loans and Advances</u>				<u>D e p o s i t s</u>			
	Commercial Banks (GR)		NBFI'S (GR)		Commercial Banks (GR)		NBFI'S (GR)	
1970	1739	-	204	-	2924	-	288	-
1971	2402	(38.2)	339	(66.0)	3197	(9.3)	442	(53.8)
1972	2428	(1.0)	492	(45.2)	3545	(10.9)	583	(31.8)
1973	3228	(33.0)	656	(33.2)	4537	(28.5)	677	(16.1)
1974	4163	(29.0)	792	(20.8)	4955	(8.7)	817	(20.7)
1975	4682	(12.5)	1018	(28.5)	5840	(17.9)	1254	(53.5)
1976	5314	(13.5)	1429	(40.4)	7157	(22.6)	1430	(14.0)
1977	7225	(36.0)	1728	(21.0)	10507	(46.8)	2107	(47.4)
1978	9274	(28.4)	2235	(29.3)	12131	(15.5)	2828	(34.2)
1979	10638	(14.7)	2309	(3.4)	13712	(13.0)	4936	(74.5)
1980	12226	(14.9)	4024	(74.2)	14002	(2.1)	6389	(29.4)
1981	13194	(7.9)	5123	(27.3)	15686	(12.0)	7801	(22.1)
1982	14633	(10.9)	6697	(30.7)	18392	(17.3)	10256	(31.5)
1983	16235	(11.0)	7898	(17.9)	19450	(5.8)	12536	(22.2)
1984	18197	(12.1)	10162	(28.7)	22159	(13.9)	17327	(38.2)
1985	20900	(14.9)	12094	(19.0)	24593	(11.0)	19934	(15.1)
1986	22918	(9.7)	12295	(1.7)	30954	(25.9)	22127	(11.0)

Source: Central Bank Quarterly Economic Review (various)

(GR) - Growth Rate

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2.7: GOVERNMENT POLICIES TOWARDS THE CO-OPERATIVE SECTION

It has been a government policy to assist the SACCOS so that they can achieve their objectives mentioned earlier. And for these objectives to be achieved SACCOS must do proper investment with the available funds so that more funds are generated. They must also get or seek advisory, supervisory and material assistance from the government. The Kenya government has responded by issuing policy papers e.g. the sessional papers of 1965, 1970, 1975, 1982 and 1987. In all these policy papers, policy guidelines for SACCOS and for co-operatives in general have been spelt out very clearly. And the government has continued to supply auditors and supervisory staff to this sector.

It has been noted that SACCOS provide loans, investment funds and help in the economy indigenisation thus contribute to national development. In response to that role, the government has stressed the need to generate more funds by SACCOS for retained earnings and reserves so that in case of liquidation or any other similar problems, the members liabilities is reduced. To convert that response to a reality the Ministry of Co-operative Development (MOCD) issued a paper entitled "The Indigenisation of the National Economy Through Co-operatives" in 1987, where policy guidelines have been given. For example, the government has stressed the need to start co-operatives in the informal sector so as to expand the roots of co-operative movement hence increase its contribution to the national economy (Republic of Kenya, 1987 and MOCD, 1982). For SACCOS to initiate processing industries as has been suggested in the past, more retained earnings and reserves will be necessary. There exist guidelines in the government policy papers on how to spend the surplus and deposits but none exist for the retained earnings and reserves. There is need for the latter (MOCD, 1985).

As a government policy, the MOCD has stressed on strong liquidity based SACCOS through increased retained earnings and deposits. The Co-operative Sector has been urged to do intensive research to find out ways and means of creating incentives so that people can increase their contributions thus national savings will also rise. This study is a response to this call for intensive research. One of the methods has been to make sure that the co-operatives are run properly and audited so that members have faith in them. The government has gone as far as providing the personnel in the form of auditors and supervisory staff to assist the young and weak co-operatives. The provision of these government services can be seen in figure 2:- The organization chart above. The government has been giving both material and moral assistance.

Other government policies towards the SACCOS as spelt out in the paper entitled "Policy and Guidelines on Co-operative Investment", (MOCD/ORG/7/55/25th November, 1985) include:- Standardization of loan policy, making insurance programmes easily accessible, standardizing accountancy, auditing system and cheque transactions. It has also been government policy that each SACCO should operate credits using its own funds and not borrowed funds. But funds inadequacy and management inefficiencies has prevented the achievement of this policy recommendation. Staff-training, encouraging small-scale enterprises through co-operatives and inter-lending in order to assist weak societies is also another government policy towards this sector.

Despite all these policies more is yet to be achieved through co-operatives in general and SACCOS in particular (National Co-operative Development Plan, 1976-80). In summary the government policies in the co-operative sector has been directed towards the following themes:-

encouraging members both individually or as groups to invest in viable small-scale industries, encouraging co-operatives to initiate processing activities, strengthening of the financial status of these co-operatives, standardization of loan policy, insurance programmes, accounting and auditing services, and the most important is the usage of the co-operative sector in the indigenisation of the Kenyan economy. To make sure that these policy-implications succeed, the government has even taken the initiative of seconding officers to some of the societies which are unable to employ qualified staff. This is in line with the policy of protecting members funds and encouraging more saving thus improving the national savings (Mshiriki Wa Kenya, June 1987).

2.8: PROBLEMS OF THE CO-OPERATIVE SECTOR

Like all other sectors of the Kenyan economy, Co-operative Sector has also faced several problems. Some of these problems have constrained this sector's performance thus reducing its rate of growth of its contribution towards the national economy. As mentioned earlier, the early SACCOS faced several problems like liquidity, irregular contribution and tribal sentiments. This led to dormance or inactiveness and inquiries in SACCOS. The table below shows the extent and the declining trend of the effect of these problems on co-operatives in general between 1932 and 1969.

Table 13: Liquidation and Registration of Co-operative Societies
in Kenya, 1932 - 1969

Period (a)	Registration (b)	Liquidation (c)	Still in Register (d)	$\frac{C}{b}\%$
1932 - 50	258	183	75	70.9
1951 - 59	511	168	343	32.9
1960 - 64	647	65	582	10.0
1965 - 69	478	29	448	6.1
Total	1894	445	1449	23.5

Today, Kenya's SACCOS face the following problems:- inactiveness, non-implementation of the check-off system, lack of transport for supervising officers, division among committee members, misapplication of funds, poor book-keeping, audit arrears and loan defaults (SCPS, Kericho 10-14, November, 1986). Because of non-implementation of the check-off system, certain SACCOS have not been able to get sufficient funds thus becoming weak hence the problem of dormance crops in. Lack of transport for supervising officers has prevented them from correcting anomalies in certain SACCOS in good time thus leading to misappropriation of funds and misunderstanding between the committee members and the members, thus leading to some societies being dissolved hence affecting the contribution of this sector to the national economy.

Poor book-keeping and lack of qualified staff has led to the problem of audit arrears and loan defaults. All these may lead to reduced profits and dividends hence the members get demotivated thus they may even withdraw or reduce their contributions. This may manipulate itself into dormant SACCOS and SACCOS under inquiries list. The loan defaults as will be mentioned later reduces the income (profit and turnover) of SACCOS and since the retained earnings and statutory reserves of SACCOS also depend on this income, they will be reduced in magnitude thus affect the liquidity position of the SACCOS and put it on a shaky footing.

The tables (17 and 18) shown below also illustrate the extent of these problems in this sector. They even go further to show the specific SACCOS that have had problems such as loan defaults, audit arrears, non-remitted funds and the actual magnitudes. Examples of the latter group has mainly been drawn from Nairobi province due to the availability of its data.

Table 14: Loan Defaults in Kshs., 1985

Society	Amount
Maungano SACCO	111,000
Kenversity SACCO	115,921
Kenchic SACCO	154,179
Uzazi Bora SACCO	63,700
Kilele SACCO	327,000
Extelcoms SACCO	105,625
Nacico SACCO	985,774

Source: Nairobi Annual Reports, MOCD (various)

Table 15: Non-remitted Funds, 1985

Society	Amount (Kshs.)
Times SACCO	600,000
Comfort SACCO	303,000
Safari Park SACCO	13,934
Utalii SACCO	86,687
Kilele SACCO	24,813
Redbull SACCO	60,000
Wanavituo SACCO	70,000
Kase SACCO	494,168
Town Printers SACCO	344,682
Matufali SACCO	111,606
Kinema SACCO	20,844

Source: Nairobi Province Annual Report MOCD, 1986

Table 16: Audit Situation in Kenya, 1970 - 80's

Period	Upto date books	1-2 years Arrears	3 or more years Arrears or Never
Early 1970's	33%	33%	33%
Early 1980's	25%	45%	31%

Source, Noormohammed, 1986

From table 16 it should be stressed that audit situation in Kenya's co-operatives has worsened over time. In 1986, several SACCOS in Nairobi province were under liquidation, for example:- Lipo-bridge, Mshauri, Printpak, Mayfair, Gobi, Kenemco, Fahari, Allied, Githehu, Akiba, Good Neighbours and Neico (Nairobi Province Annual Report, MOCD, 1986). The main explanation given for their liquidation was the non-remittance of members contribution by the employers. In the same period, several Nairobi SACCOS were having book-keeping arrears ranging from one to six years (see table 19).

Table 17; Societies status in Kenya in Early 1980's

Province	Active	Dormant	Under Inquiry	In Liquidation	Total
Central	312	16	0	3	331
Rift Valley	578	145	3	12	738
Coast	221	38	-	5	264
Eastern	200	76	-	-	276
Nyanza	285	28	1	5	319
Western	144	41	1	0	156
North Eastern	14	1	4	1	20
Total	1724	345	9	20	2104

Source: Nairobi Province Annual Report, MOCD, 1986

Table 18: SACCOS in Nairobi, December, 1985

STATUS	NUMBER
Affiliated to Unions	189
Active	629
Dormant	44
In Liquidation	3
Under Inquiry	1

Source: Nairobi Province Annual Report, MOCD, 1985

Table 19: Book-Keeping Arrears in Nairobi SACCOS, 1986

Society	Since When
Uzi SACCO	1980
Sahani SACCO	1982
Booth "	1983
Diversy "	1984
Olivetti "	1983
Prude "	1985
Jik "	1985
Kikombe "	1985
B.A.T. "	1985
Ngozi "	1984
Twiga "	1985
Bok "	1984
CP "	1985

Source: Nairobi Province Annual Report, MOCD, 1986

It should be noted that all these problems and their implications on this sector has reduced the sectors contribution to the national economy.

2.9: SOME BRIEF NOTES ON THE KENYAN FINANCIAL SECTOR VERSUS THE SACCOS

The Kenyan financial sector is composed of several institutions which differ in terms of operations depending on their legal framework of definition and registration. Notably, we have the commercial banks, the Non-bank financial institutions such as the building societies, finance houses, the insurance financial institutions and many other forms of financial institutions. The SACCOS, normally referred to as credit unions in America, also operate as financiers and therefore belong to the financial sector. Infact it is argued that they compete these other institutions for deposits. The Kenyan situation shows that they are favoured by the public because they charge low interest rate on loans, and give less restrictive conditions for loan acquisition.

Commercial banking in Kenya goes back to 1896 when the National bank of India (predecessor of Kenya Commercial Bank) opened its first branch in Mombasa. It was followed by the standard bank of South Africa in 1910. The third bank to open a branch in Kenya was the National bank of South Africa (the predecessor of the Barclays bank of Kenya Limited) in 1916. Historically the main objective of these banks was to develop trade links (between East Africa, Europe, South Africa and India) rather than to develop banking business in the country's interior. Other banks include:- Algemene bank of Nederland N.W. (1951), Bank of India and Baroda (1953), Habib bank (1954), Turkish Ottoman bank (which was later transformed into Grindlays bank in 1971) (1958), Co-operative bank of Kenya (1965 and 1968), Central bank of Kenya (1966) and National bank of Kenya (1968). Other recent but non-indigenous banks include:- Bank of Credit and Commerce International, Middle East bank, Bank of Oman, Citibank, and First America Bank of Chicago. The indigenous banks include Post Office Savings bank, Continental bank (under receivership), Union bank,

Transnational bank and Trade bank. All started between 1980 and 1985, except the Post Office Savings Bank (Weekly Review, May 22, 1987).

The Commercial Bank deposits have risen from 1.7 billions Kshs. in 1967, 7.2 billions Kshs. in 1976, 10.5 in 1977, 14 in 1980 upto 27.36 billions Kshs. in 1986. Their loans and advances have also increased from 1.36 billions Kshs. in 1967, 12.2 in 1980 upto 23 billions Kshs. in 1986. For more details refer to table 12 above (Weekly Review, May 22, 1987).

Initially the banking sector had been dominated by subsidiaries of foreign-owned banks. However, of later there is an emergence of indigenous private banks and non-bank financial institutions to supplement the two government owned commercial banks i.e. the Kenya Commercial bank and the National bank of Kenya. The other change in the structure is in terms of ownership. Certain banks have gone public. For example Barclays bank sold 30 per cent of its shares to the public in 1986, and the Standard Chartered bank of Kenya has taken over the local business of Standard bank of Africa P.L.C. SACCOS have a task of assisting our indigenous banks in this process of indigenising the Kenyan economy and her financial sector, a policy that has been stressed since Independence and will continue to be stressed.

CHAPTER THREE: LITERATURE REVIEW

3.1: INTRODUCTION

This section reveals the level of preparation of the researcher. It also gives the theoretical background of certain variables and the expected signs of these variables that are used in the model. This section will be divided into three subsections

(a) General and Theoretical Literature

It covers co-operatives and savings. The theoretical aspect covers non-empirical literature on savings and co-operatives which is based on economic theory. The general and theoretical literature is thus useful in the formulation, testing of hypotheses and other analyses.

(b) Empirical and Specific Literature

This covers actual work done in the areas of co-operative, savings and other related areas. It helps in the formulation of hypotheses for the current study and is useful in the comparison between earlier results and the results of this study. In this section we mention the objectives of that particular study how it was carried out, methodology used, type of data, sampling method and the results.

(c) Overview of the Literature

Briefly explains the strengths and weaknesses of past studies and the gap that exists in the current literature that this study is set to fill. The weaknesses could be in terms of haphazard treatment of the subject, misconceptions in the theoretical framework adopted by previous researchers or use of faulty methodology.

3.2: GENERAL AND THEORETICAL LITERATURE

Ashley (1956) commented on the distribution of dividend and retained earnings. According to him the discussion should be on the proportion but not on whether to distribute dividend or retain the profit. He summarized the reasons for retaining earnings as:-

- (a) Equalising dividend in good and bad times,
- (b) Enabling the company to withstand depression,
- (c) Maintaining the credit of the company,
- (d) Reducing fixed charges by enabling the company to redeem its bonds,
- (e) Recognising the pre-emptive right of existing shareholders in the growth of the company,
- (f) Reducing cost and formality of financing expansion and enabling gradual growth,
- (g) Financing cyclical increases in inventories and receivables, and,
- (h) Providing for the increased cost of replacement of fixed assets in periods of rising prices. Some of these reasons may apply to SACCOS e.g. (a), (c), (e), (f) and (h) even though they (SACCOS) are not companies. He recognised the impact of taxation on dividend policy. All these could be hypotheses subject to empirical test hence this study will test some. Ashley's study did not attempt any empirical analysis.

Campbell (1959) briefly discussed about co-operatives as they exist in Asia and Africa. He gave a brief idea about SACCOS but never gave detailed analysis in terms of performance, activities, structure and administration.

Karanja (1972) focused on management problems facing marketing co-operatives. He suggested some solutions but none of them is binding since there was no empirical study and results to back them.

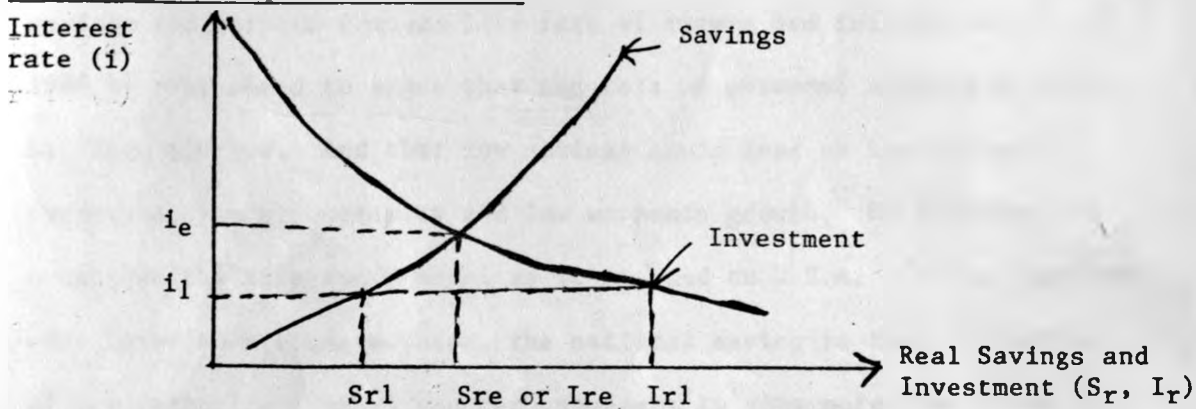
Hyden (1973) commented on the "Efficiency versus Distribution in East African Co-operatives:- A study in Organization Conflicts".

He summarized the need for co-operatives, gave a brief history of co-operative movement in Africa and Kenya as may have been mentioned earlier in this paper. He divided the historical co-operative growth in Africa into three periods:-

- (a) 1951 - 1959: the price boom period,
- (b) 1960 - 1964: the Independence period, and,
- (c) 1965 - 1970: the Post Independence period. But he never recognized the various types of co-operatives that existed and many other aspects

Galbis and Fisher (1982) feel that real rate of interest is the most important factor in determining the equilibrium between savings and investment. Galbis seems to support the neoclassical economics where savings is positively correlated to interest rate. But recent monetarists have challenged this conclusion. What could the situation be like in the SACCOS?

Figure 3: Neoclassical equilibrium of real interest rate and alternative disequilibrium states



Assumptions made in figure 1 include:-

- 1) that investment is outside financed,
- 2) that there is a single real rate of interest,
- 3) that only real magnitudes are relevant, and,
- 4) that inflationary expectation is equal to actual inflation.

If these assumptions are violated then the diagram may break down.

Gonzales (1982) argued that "interest rate held below market level would reduce savings, capital formation and efficiency of investment" (see figure 1 when interest rate = i_1). Hence he was for interest rate reform in order to encourage both savings and investment. He argued that, given insufficiency of individual savings, credit is a major tool to promote capital formation and alleviate the shortage. He reviewed the arguments for and against low interest rate with respect to savings and investment or capital formation. He argued that interest rates in less developed countries (LDC'S) have been too low to reflect scarcity of funds or capital.

Juster (1984) pointed out that a rise in saving would reduce federal deficits. He also held that time-series data does not support the view that consumer saving will respond significantly and positively to rates of return. Thus there is no clear relationship between savings and certain factors like rate of return and interest rate. In 1986 he went ahead to argue that the rate of personal savings in U.S.A. had been too low. And that low savings could lead to low capital formation, low productivity and low economic growth. He reviewed and confirmed the life-cycle model as it applied to U.S.A. Since consumers save first then dissave later, the national saving is thus a function of any factor that makes younger consumers to save more, he argued.

He held that low savings lead to low capital formation. Though he noticed some relationship between savings and interest rate, he never specified the nature and extent of this relationship. He postulated that compensation paid in the form of bonuses and the ratio of savings to income are highly correlated.

Lazaros (1986) re-examined the Mckinnon-Shaw hypotheses of interest sensitivity of investment and savings. Both Mckinnon and Shaw have challenged the policy of low interest rate as a way of promoting economic growth. They argued that savers find it better to accumulate funds and then invest them later. Hence higher returns on deposits encourage both savings and investment or capital formation (Mckinnon and Shaw, 1973). But this argument may break down if we have savers who do not find it necessary to accumulate funds first. Infact Lazaros argued that empirical work has failed to support Mckinnon and Shaw's hypotheses. Mckinnon argued that financial repression (low deposit and low loan rates) forces an investor to save for sometime before investing thus "deposit serve as a conduit for capital formation". Therefore deposits and physical capital are complimentary. Dividends and retained earnings may also be related even though they are guided by the co-operative act. The above scholar has postulated that savings is a function of loans supply in current period, expected rate of return on capital and rate of return on deposits in the previous period. Hence the question is, can these assertions be justified empirically in the case of SACCOS?

Mungai (1986) reviewed the role played so far by SACCOS in Kenya's economic development. He went ahead to discuss the regional distribution of SACCOS in Kenya and their typological distribution in co-operative movement (Details are discussed in the previous chapter). This discussion has helped the author of this paper to choose the right and representative sample size and the right location to draw the SACCOS from.

✱ Mwarania and Mutugu (1986) focused on the role SACCOS would play in Kenya's economic development. They argued that "the one per cent interest charged on loans gives a misleading signal on the relative scarcities of funds". They saw SACCOS as a part of Kenya's financial system hence needing some financial attention. According to them, funding of SACCOS is no more the responsibility of only deposits/ share capital of the members but also of corporate savings. Hence there is need for dividend and retained earning policies to be streamlined. Thus they have raised the issue of need to increase corporate saving even though they did not specify how that can be done.

✱ Mutugu and Minishi (1986) also reviewed the role of co-operatives in Agricultural development, especially the marketing of agricultural products. Makanda (1986) also commented on the potential role of co-operatives in Agri-business, nature of co-operative movement and reasons for poor performance in Kenya. But the above scholars have not done any empirical analysis to give binding and testable conclusions.

Most other scholars who have taken keen interest on co-operatives have focused mostly on agricultural co-operatives. Though agricultural co-operatives are many in Kenya, the role of SACCOS in the movement should also be recognized especially in the financial sector hence the need to focus on this sector. Papers written on agricultural co-operatives in 1986 included those by Olewe-Nyunya, Kooko Kalenda, Ochoro, Odada, Aggrey and Coughlin.

But none of these scholars seem to have noticed the central role played by SACCOS in the co-operative movement and how they compete with the commercial banks and Non-bank financial institutions for the existing funds. It is this neglected area that this study focuses on hence fills that gap in literature.

3.3: EMPIRICAL AND SPECIFIC LITERATURE

Karanja (1970) carried out an empirical study on the development of co-operative movement in Kenya. His approach was quite useful for the people in the field of history but less useful for economists whose main interest is proper resource management rather than historical development. His study was too general covering almost all types of co-operative societies hence useful for only general and vague idea about the co-operative sector. It is not adequate for specific policies aimed at improving one type of co-operative society e.g. SACCOS.

Friend and Puckett (1972) carried out a study to find out the relationship between dividend, retained earnings, stock prices and future returns. They used simple multiple regression model and cross-sectional time series data. Assuming constant risk, and that expectations of growth are determined solely by the relative amount of current earnings, they specified the following regression models:-

$$(i) \quad D_{it} = e + f E_{it} + g D_{i(t-1)} + h (P/E)_i(t-1)$$

$$(ii) \quad P_{it} = a + b D_{it} + c R_{it} + d P_i(t-1)$$

where, models (i) and (ii) are the dividend supply equation and price of share function respectively,

a, b, c, d, e, f, g and h - parameters

D_{it} - dividend in period t

P_{it} - Price of share in period t

E_{it} - Earnings per share in period t

R_{it} - Retained earnings in period t

$D_{i(t-1)}$ - dividend in previous period

$P_i(t-1)$ - previous expectation price

$(P/E)_i(t-1)$ - Measures individual deviations from the sample average price-earnings ratio in the previous period.

From the above models the following results were got:-

- (a) price of shares is positively correlated to both dividend and retained earnings in all industries observed,
- (b) there existed strong dividend and relatively weak retained earnings effect on price of shares in three of the industries (chemical, food and steel), and
- (c) the pay-out ratio has tended to decline from year to year plus some change of direction by the end of the period.

They concluded that both retained earnings and dividends were important in industries. But the assumptions of constant risk and that expected growth is solely determined by current earnings make this study weak, because if these assumptions are violated then the results may be different. Hence in this study we observe constrained results. But despite these assumptions it is a useful study.

Research carried out in 1977 by the Ministry of Co-operative Development on SACCOS revealed the following:-

- 1) Almost all SACCOS were in arrears in posting of personal and general ledgers and trial balances,
- 2) That mismanagement and embezzlement of funds was common,
- 3) That there existed inadequate management, accounting and internal control systems applicable to SACCOS' operations, and
- 4) That control over liquidity was inadequate.

But the methodology and type of data used to come up with the above revelations were never explicitly stated. Furthermore, no statistical analysis was done to verify these assertions. No data was explicitly tabulated in the study to show how funds were embezzled, how few qualified managers were and even the total SACCOS in arrears as a percentage of the total SACCOS in the country. However, the

survey assisted the MOCD in coming up with a management and accounting manual for urban SACCOS in 1982. If the recommendations of this manual are followed closely then the performance of SACCOS is likely to improve and of course this study is also a supplement to the ministry one and may be useful as well.

Goran (1978/79) also carried out a study on the leadership profile of co-operatives in Kenya. He wanted to know who dominates the leadership in Kenyan Co-operatives and how they maintain themselves in those positions. He used simple statistical tools and cross-sectional primary data to achieve his objectives. His research revealed that most leaders were farmers, teachers, traders and civil servants. And that they used money to maintain themselves in leadership. This study focused on agricultural co-operatives only without explaining why. Hence it never revealed how the situation is like in other types of co-operatives e.g. SACCOS. Thus its sample was not representative of the actual situation in Kenya. Furthermore, today civil servants are no longer allowed by law to hold elective posts in the co-operatives. They only act as overseers, supervisors and take charge of only trouble-ridden co-operatives.

Ndege (1979/80) conducted a research to know more about the members of SACCOS. His main concern was to identify the problems and learning needs of the SACCOS members so as to come up with policy guidelines for educating them. His approach to this study was termed "andlogological action research method" i.e. where both the learners, planners and implementors of the programme are all involved. He used cross-sectional primary data. He interviewed 50 members of A SACCO.. He evaluated the responses theoretically by use of some simple statistical tools. The result was that 80 per cent of the respondents had never had co-operative member education. Noting that the membership

of SACCOS is too large (450,000 at that time), a sample of 50 may be regarded as proportionately too small to be very representative. Furthermore, the sample was drawn from only one SACCO. The basis or rationale and procedure followed in the choice of this one SACCO was never made clear to readers. Was it arbitrarily or randomly chosen? Hence the policy implications may not be suitable to all SACCOS. But, otherwise this was a foundation for more serious research in the area of SACCOS.

Furstenberg (1980) estimated the determinants of net U.S.A. foreign investment and savings. He divided the savings into government, personal and corporate. This is quite useful for savings type oriented policies. But not very useful for sectoral policies because it is too aggregative. He used time-series data and applied simultaneous equation models in order to remove simultaneity bias and account for both direct and indirect effects of variables. Specified below are the three major models he estimated:-

$$(i) \quad GS = f [AN, GAP, (PI-EPI), U_{-2}, U_{-4}, U_{-1}]$$

$$(ii) \quad PS = f(AN, CDUR, CS, DM, GAP, TAX, TRANS, YP, U_{-1})$$

$$(iii) \quad CS = f(DGAPA, GAP, IVAC, POTGR, TCO4, TC48, U_{-1})$$

Where,

GS - Government saving rate

PS - Personal Saving rate

CS - Corporate saving rate

AN - Fiscal abnormalities or surprise rate

GAP - Output gap rate

(PI-EPI) - Difference between actual and expected inflation rate

$U_{-2} \ U_{-4}$ - Change in unemployment rate lagged

U_{-1} - Lagged error term

- CDUR - Deviation of rate of spending on consumer durables
from past average
- DM - Change in inverse of potential output
- TAX - Aggregate tax rate
- TRANS - Aggregate government transfer payments
- YP - Young people (25-34 years) to total population
- DGAPA - Change in output Gap rate
- IVAC - Rate of inventory valuation adjustment
- POTGR - Growth rate of potential output
- TC04 - Change in corporate profit tax rate over the past year
- TC48 - Change in corporate profit tax rate three years before •

His main results were:-

- (a) Corporate savings and net investment in consumer durables are substitutes for personal savings,
- (b) Growth rate of potential output increases corporate savings and fixed investment rates,
- (c) Corporate savings and fixed investment have positive correlation, and
- (d) A decline in growth rate of potential output will increase net foreign investment but will reduce national investment more than national savings. These results are more useful for national policies rather than sectoral policies. Secondly they support the postulation of economic theory. The main weakness is that the models used may have suffered from serious multicollinearity problem which may have affected the estimates. The author does not specify how he went around to eliminate that problem.

Oludimu (1982) studied the determinants of savings and its relationship to credits in the Nigerian agricultural sector. He used a correlation matrix model fitted in cross-sectional primary data.

The model was specified as below:-

- (i) $Msa = Corr (La, Msh, Srs, M)$
- (ii) $Msh = Corr (Msa, M, Srs)$
- (iii) $Srs = Corr (Msa, M, Msh, La)$
- (iv) $La = Corr (Msa, M, Srs, Msh)$
- (v) $M = Corr (Srs, Msh, La, Msa)$

Where,

Msa - Members Savings

La - Amount of loans received by members

Msh - Members shares

Srs - Societies realised surplus

M - Membership

Corr - Correlated to

The results were:-

- (1) Members savings and loans they obtained from societies were positively and significantly correlated,
- (2) Savings and membership were positively and significantly correlated, and
- (3) Realised surpluses and members shares were also positively and significantly correlated. His conclusion was that the more the members save the more the society is able to mobilise funds and disburse loans or credits. This is a very useful and relevant study to the current study.

It has got much to offer in terms of variables. However, the methodology is weak. It never considered inter-dependence of variables. Another problem is multicollinearity. For example the results show that societies realised surplus and members shares are positively and

significantly correlated yet both of them appear as explanatory variables in equation (1). The author never made the readers aware of whether it was deliberately introduced and how he eliminated it later. Otherwise if it was not eliminated then the estimates could be biased, inconsistent and this would lead to misguided policy implications.

Qureshi (1983) looked at the determinants of corporate savings in Pakistan. His objective was to establish firms' behaviour with respect to retention and distribution of profits. He lamented about the neglect of this area. He wanted to know the role of these factors and whether it was significant or not. Qureshi used a multiple regression analysis and time series data to estimate the dividend and retained earnings functions. His results can be summarized as follows:-

- (a) Firms favoured stable dividend policy,
- (b) Profit was the main determinant of retained earnings. Its coefficient was positive and significant,
- (c) The fixed investment outlays and rates of expansion were positively and significantly related to retained earnings,
- (d) Interest rate and cost of external finance were positively correlated to retained earnings but their coefficients were insignificant, and
- (e) Corporation income tax was negatively correlated to both retained earnings and dividends but the significance was never established.

Kumar and Khurana (1984) studied the determinants of corporate dividend in India since it influences the growth of a company. The study wanted to know the influence of factors such as net profits, liquidity, share prices, reserves, investors expectation and investment levels on dividend. They used cross-sectional data and administered questionnaires to 65 firms to collect that data. These factors were ranked depending on the frequency of "YES" or positive responses. The

study revealed that net profits after tax, liquidity position and reserves were the most important factors. However, this statistical methodology of ranking is too simple to give binding results. No test of significance was done or could be done using this methodology since standard errors are not known. The study does not reveal any relationship between the independent variables themselves which we believe does exist. The study assumed that net profits can only be retained or paid out as dividends hence never talked about statutory reserves. The results discussed above are given below in tables 20 and 21.

Table 20: Ranking of Factors that either reduce rate of dividend or cause skipping of its payment

Factors	Frequency
1. Decline in net profit after tax	55/65
2. Poor Liquidity position	31/65
3. Undertaking of capital projects	14/65
4. Decline in sales	7/65
5. Accumulated burden of past tax liability	3/65
6. Loss of funds in Research and development	1/65

Source: Kumar and Khurana, 1984

Table 21: Ranking of Factors that cause Increase in Dividend

Factors	Frequency
1. Increase in net profit after tax	56/65
2. Better liquidity position	36/65
3. Better Reserves	21/65
4. Wind fall profits	5/65
5. Raising of funds from market	4/65
6. Substantial tax credit/capital gains	2/65
7. Any other	1/65

Source: Kumar and Khurana, 1984

Rao and Sharma (1984) carried out a research in India to determine the primacy of corporate dividend decisions over retained earnings. They wanted to know whether most firms exhibit a constant target payout ratio or it depended on the nature of product and financial markets in which the corporate sector functioned. They also wanted to know from whose view (vantage) point is dividend paramount. Whether it is from the management or the shareholders. They used a simultaneous equation model and cross-sectional data collected from a sample of firms randomly selected. Four equations were simultaneously estimated:-

$$(a) \quad SPT = f(DT_{-1}, LEV, SC/F, PT_{-1}, PRT, PRT/ST)$$

$$(b) \quad DT = f(PT_{-1}, PRT, LEV, EF, SC/F, CIS, RET, IT, RT_{-1}, DT_{-1})$$

$$(c) \quad NWT = f(IT_{-1}, AT_{-1}, CAT, RT, WT_{-1})$$

$$(d) \quad IT = f(RET, EF, CIS, CAT)$$

Where,

SPT	-	Share price at time T
DT ₋₁	-	Dividend per share at time T-1 (lagged)
LEV	-	Debt-Equity ratio
SC/F	-	Share Capital to total assets ratio
PT ₋₁	-	Share price at time T-1 (lagged)
PRT	-	Profit after tax
PRT/ST	-	Profit after tax to sales ratio
DT	-	Dividend per share at time T
EF	-	External finances
CIS	-	Change in sales
RET	-	Retained earnings
IT	-	Investment in Fixed assets
RT ₋₁	-	Profits at time T-1 (lagged)
NWT	-	Net Worth

IT ₋₁	-	Investment in Fixed assets at time T-1 (lagged)
AT ₋₁	-	Fixed assets at time T-1 (lagged)
CAT	-	Current assets
RT	-	Reserves and surpluses
WT ₋₁	-	Networth at time T-1 (lagged)

Results were as follows:-

- (i) Most shareholders value dividend, and
- (ii) Management also values dividend in order to reduce shareholder antagonism while at the same time pursued the policy of increasing network of the firms through increased retained earnings. This study revealed the importance of dividends and retained earnings but it never specified the type of firms it dealt with. Furthermore, it never gave the solution to likely multicollinearity problem in some of those functions. Otherwise it is a useful study to industrialists.

Giovannini, (1985) used cross-sectional time series data to determine the interest elasticity of saving and the magnitude of aggregate savings response to changes in real rate of interest in LDC's. He used the Two Stage Least Squares (2SLS) (Gurley, Patrick and Shaw, 1965, Fry and Balasa, 1983). His dependent variable was domestic savings as a ratio of GDP. And the explanatory variables were:- the growth rate of real GNP, log of per capita GNP, real time deposit rate of interest, ratio of trade balance deficit to GNP and lagged dependent variable. Some of the models estimated were as follows:-

(i) $S_t = f(Y, I_r, F_s, S_{t-1})$

(ii) $S = f(Y_r, P_r, R_r, D_r)$

Where,

S_t - Savings as a ratio of GNP

Y - Real income growth rate

I_r - Real interest rate

F_s - Foreign savings rate

(S_{t-1}) - Lagged savings as a ratio of GNP

S - Ratio of domestic savings to GNP or GDP

Y_r - Rate of growth of per capita income

P_r - Rate of growth of population

R_r - Realised real interest rate

D_r - Dependency ratio

Giovannini found that for smaller samples, real interest rate and savings were positively and significantly correlated. And that for larger samples it was an insignificant negative relationship. Rate of growth had a positive and significant effect on savings. His conclusion was that savings does not respond positively to the rate of interest in less developed countries (LDC's). This is contrary to some earlier results. One notable weakness of this study is that he never defined the size of the sample regarded as small or large, and this could have induced the above results.

Venti and Wise (1985) analysed the determinants of contribution to individual retirement accounts, precisely determinants of some form of personal savings. The objective was to use the results in drawing up policies that can encourage retirement savings and increase national savings. They used cross-sectional data and simple regression model. They found that people prefer "tax-deferred savings" and that those who save more in one form tend to save less in others, thus the existing savings forms are substitutes. There are many forms of savings hence

the study would have been more strong if they had specified the forms that are substitutes and the extent of the substitution.

Zakia, Ramadhan and Kwayu (1985) undertook a study to establish the extent of participation of women in the co-operative movement in Eastern, Central and Southern Africa. Their research done in Tanzania and Zambia's SACCOS revealed that savings per member was higher for women than it was for men. They concluded that "given that women earn less than men it can be said that their propensity to save is greater than that of men". But it is questionable as to whether they still earn less. Furthermore, is it not so obvious that their propensity to save should be higher since most of them depend on their husbands for their daily expenditure? This propensity can also be explained by the African way of life where men are expected to have more responsibilities. The study should have disaggregated the women into those who are married and single so as to come up with a more meaningful and convincing conclusion.

Edward and Khan (1985) using both cross-sectional and time-series data from Colombia and Singapore analysed the determinants of interest rate with the objective of drawing up stabilization policies affecting demand. Both linear and log-linear multiple regression models were tried. Coefficients of foreign interest rate, real income or lagged real money balances, expected inflation and lagged interest rate were positive and significant for Colombia. As for Singapore they were positive but insignificant except for foreign interest rate coefficient. The weaknesses of this study as reviewed in the IMF staff papers are:-

- (a) The estimated functions suffered from simultaneity bias because the expected devaluation and interest rate may each determine the other (hence two-way determination), and

(b) Combining both open and closed economy is restrictive because the index measuring the degree of financial openness of these two types of economies differ. Furthermore, this study assumes a constant degree of openness of the financial sector in the country under study (IMF staff papers, 1985).

✓ Harloka (1986) attempted to answer the question, why Japan's private savings rate is so high. His model was based upon the life-cycle hypothesis of Franco Modigliani. He used cross-sectional data for various countries. His results were that:-

- (i) Life-cycle hypothesis was confirmed,
- (ii) Inflation has a positive and significant impact on private savings,
- (iii) Higher land prices implies greater savings,
- (iv) Pension related factors do not affect savings,
- (v) Underdevelopment of social security scheme does not increase savings, and
- (vi) The level of social security benefits and private savings rate are negatively and significantly correlated.

He concluded that Japan's savings rate is high because of low ratio of the aged, higher per capita income and land prices, low ratio of youths and low inflation rate. But the study assumed non-dependence of all the independent variables hence the model estimated is likely to suffer from simultaneity and specification bias.

De Melo (1986) looked at the effects of financial liberalization (interest rate decontrol) on savings and investment in Uruguay. He used time-series data and simple multiple regression models. The

equations or functions specified and estimated were as follows

$$(i) \quad S_t = f(B_0 + B_1 Y_t + B_2 r_t + B_3 f_t + B_4 e_t + B_5 D_t + B_6 S_{t-1})$$

$$(ii) \quad I_t = f(B_0 + B_1 Y_t + B_2 Y_{t-1} + B_3 M_t + B_4 M_{t-1} + B_5 e_t + B_6 R_t + B_7 D_t + B_8 I_{t-1})$$

where,

$B_0, B_1, B_2, B_3, \dots, B_8$ - Parameters.

S_t - total savings as a ratio of GDP in period t

Y_t - Real GDP growth rate in period t

r_t - Real ex post deposit rate in period t

f_t - Foreign saving as a ratio of GDP

e_t - Real exchange rate

D_t - Regime dummy

S_{t-1} - Lagged total saving as a ratio of GDP

I_t - Investment as a ratio of GDP in period t

Y_{t-1} - Lagged GDP growth rate

M_t - Real money growth rate in period t

M_{t-1} - Lagged real money growth rate

R_t - Real export rate

I_{t-1} - Lagged investment as a ratio of GDP.

He found positive but insignificant correlation between interest rate and savings. Coefficients of deposit rate, lagged savings and real GDP were also positive. Foreign saving had a negative impact. This is a very useful study for national policies but it suffers from aggregation problems hence it is less useful for sectoral policies.

Sandhu and Goswani (1986) looked at the determinants of commercial bank deposits in India. They wanted to know the determinants so that they would be able to suggest appropriate policies which could uplift

the rate of increase of deposits in order to meet the increasing demand for bank credits. The research also intended to reveal the determinants of demand for demand deposits in India. Two functions were specified and estimated. Cross-sectional data was used. The functions were estimated using a step by step multiple regression model.

The models were:-

$$(a) \quad D = f(Y_{or} Y_{na} \text{ and } Y_a, i_G, i_I, BC, i_D, D_{-1}, N)$$

$$(b) \quad DD = f(Y_{or} Y_{na}, Y_a, i_G, i_I, BC, N, i_T)$$

$$(c) \quad TD = f(Y, Y_{na}, Y_a, i_G, i_I, BC, i_T, TD_{-1})$$

Where,

- D - Deposits of all commercial banks
- Y - National income at current prices
- Y_{na} - Non-agricultural income at current prices
- Y_a - Agricultural income at current prices
- i_G - Yield on government securities
- i_I - Yield on variable dividend industrial securities
- BC - Bank credits of all scheduled commercial banks
- i_D - Interest rate of deposits
- D_{-1} - Lagged deposits
- N - Number of offices of all scheduled commercial banks
- DD - Demand deposits
- i_T - Interest rate on time deposits
- TD - Time deposits
- TD_{-1} - Lagged time deposits.

The results show that:-

- (i) Non-agricultural income, bank credit were positively correlated to the demand for bank deposits and significant at 1 per cent level,
- (ii) Yield on government securities was negatively correlated to demand deposits and significant at 5 per cent level,
- (iii) Demand deposits and number of bank offices were also positively correlated and significant at 1 per cent level, and
- (iv) Time deposits was positively correlated to non-agricultural income, interest rate, time deposits in the previous year, number of bank offices and bank credit. But only interest rate and previous year's deposits were significant at 1 per cent level. From the above, we notice that the methodology used could lead to simultaneity bias. The division of income into agricultural and non-agricultural may not be realistic (practical) in certain countries and may also bring multicollinearity problem hence affecting the estimates and the final policy implications thereafter. The reasons for the disaggregation were never spelt out hence one is bound to say that it was arbitrary.

Noormohammed (1986) analysed the problem of auditing of accounts in Kenyan co-operatives. He used certain statistical techniques to show the extent of the problem. Table analysis and comparison was used to verify the existence of and extent of that problem. The study revealed that one third of the co-operatives were upto date with their audits, one third were two years in arrears and the remaining were either several years in arrears or has never been audited. Reasons for the audit problems were given as:-

- (1) Some societies were newly registered,
- (2) Some were dormant,

- (3) Others were under liquidation,
- (4) Because auditors had not been appointed,
- (5) Books of societies were poorly kept due to lack of trained staff,
- (6) Books of accounts submitted were incomplete,
- (7) Negative attitudes of committee members and employees,
- (8) Lack of audit staff,
- (9) Staff transfers (MOCD), and,
- (10) Lack of transport for MOCD auditors.

The table below supports his findings stated earlier.

Table 22: Audit problem in Kenyan Co-operatives, 1985

Number of societies	Extent of the audit problem
462	Upto date
1215	Had backlog
199	Never audited
446	1 year arrears
391	2 years arrears
378	3 or more years arrears

Source: Noormohammed, 1986

This study gave as many reasons as possible for the audit arrears. It went ahead to show the distribution of audit problem in Kenyan Provinces and also gave the extent of the problem. However, the paper never clearly stated the type of date used. Secondly it assumed that all types of co-operatives suffer from audit problems and that the intensity is the same. We believe there are certain types of co-operatives that suffer from this problem more than others, hence disaggregation should have been done to help in formulating sectoral policies. Lastly,

he gave reasons for the audit arrears. But no attempt was made to analyse the part played by each so that we are able to know the most frequent and significant, so as to give them first priority in solution formulation.

Najafi, Torkamani and Soltani (1987) in Iran, carried out a survey to find out the trend of membership, causes of decline, problems and membership satisfaction in the agricultural co-operatives that were formed by graduates using loans given to them by the government. They used cross-sectional data and simple statistical techniques such as averages, percentages and tallying. They concluded that membership in co-operatives declined due to:-

- (i) Low level of income (46 per cent),
- (ii) Lack of co-operation among members (25 per cent),
- (iii) Hardness of work and lack of facilities (20 per cent), and
- (iv) Other problems (8 per cent).

The major problems these co-operatives faced included:-

- (i) Low returns (24 per cent),
- (ii) Low supply of inputs (24 per cent),
- (iii) Non-availability of capital (19 per cent),
- (iv) Long distance from main roads and lack of security (9 per cent),
- (v) Relations with centre (6 per cent),
- (vi) Lack of housing, insurance and medical facilities (6 per cent), and
- (vii) Other problems (4 per cent).

About 4 per cent never had problems and 4 per cent was accounted for by non-response. Only about 45 per cent of the members were satisfied.

The principal causes of dissatisfaction were:-

- (i) Low income (70 per cent), and
- (ii) Lack of direct relation between what the graduates had learned

and what they were doing then (30 per cent). The study focused only on agricultural co-operatives and ignored the rest. It is possible that other graduates could have formed other types of co-operatives unless the loans were restricted to only the formation of agricultural co-operatives. But of course the researchers have not informed the readers about that hence we are left doubting the focus.

Rana (1987) analysed the relationship and determinants of foreign capital, exports, savings and economic growth in the Asian region. He wanted to know the extent to which foreign capital affects economic growth or savings. His work was an improvement on Griffins and Eno's work of 1970 where multiple regression equation was used. He used a simultaneous equation model. In his use of foreign capital as an explanatory variable he assumed that, capital inflows augmented resources available, capital-output ratio is stable and that it had a favourable effect on economic growth. But these assumptions may not be fully realistic in LDC's. His use of simultaneous equation model was meant to remove the specification and simultaneity bias that earlier studies had suffered from thus leading to biased and inconsistent estimates.

Rana specified and estimated the following equations:-

$$(i) \quad GR = a_0 + a_1 AID + a_2 FPI + a_3 S + a_4 CX + a_5 CLF + u_t$$

$$(ii) \quad S = a_6 + a_7 AID + a_8 FPI + a_9 CX + a_{10} GDPN + a_{11} GR + V_t$$

$$(iii) \quad GR = b_0 + b_1 AID + b_2 FPI + b_3 CX + b_4 CLF + b_5 GDPN + e_t$$

$$(iv) \quad S = b_6 + b_7 AID + b_8 FPI + b_9 CX + b_{10} CLF + b_{11} GDPN + n_t$$

Where,

GR = Growth rate of GDP

AID = Foreign aid as a per cent of GDP

FPI = Foreign private investment (including long-term borrowing)
as a per cent of GDP

- S - Gross domestic saving as a per cent of GDP
- CX - Change in exports as a per cent of GDP
- CLF - Change in labour force
- GDPN - GDP per capita
- u_t, v_t, e_t and n_t - Stochastic error terms, and $a_0, \theta_1, \dots, \theta_{11}$
and $b_0, b_1, \dots, b_{11}$ - Parameters of structural and reduced form
equations respectively.

Using ordinary least squares (OLS) and Indirect least squares (ILS) in the estimation, he concluded that:-

- (i) Domestic savings is positively correlated to economic growth, foreign capital, GDP per capita, change in exports and labour force,
- (ii) Aid and savings were negatively correlated, and,
- (iii) Aid and GDP per capita had significant coefficients while the rest were not significant at both 5 and 1 per cent levels.

This is quite a useful study and is very relevant for the current study especially on the issue of methodology. However, it is too aggregative. Secondly, it never clearly distinguished foreign capital and Aid variables. Thirdly, it never specified the measure of economic growth and labour-force used. Normally different countries and researchers use different measures and compositions in their analysis.

3.4: OVERVIEW OF THE LITERATURE

In a nut-shell, this section critically analyses the weaknesses and the strengths of past studies. It summarises the literature and knowledge gaps that exist in the world at large and in the area of co-operatives and in Kenya in particular, which the current study aims at filling, especially with respect to the latter. It responds

to questions like:- What is it that has been done in the world and in Kenya in this area of study in summary? What is it that has not been done? What is the gap? What further areas of research has been recommended by past studies? What are the strengths and weaknesses of these past studies? How biased, unbiased and relevant are their results? Which debates have been raised in the past and still persist? How does the current study intend to fill these gaps and resolve these debates?

2 ↘ From the previous section we can notice that very little work has been done on SACCOS in Kenya. There exist virtually no work on the determinants of savings, the case of SACCOS. The few studies on SACCOS are descriptive, general and non-empirical.¹ Their assertions have not been subjected to any empirical and statistical tests. More emphasis has been given to agricultural co-operative societies². But now that the service sector is becoming more important in the process of economic development, SACCOS should get more attention especially in the area of research. This study intends to do that at a micro-level.

1 ✕ Though useful, results of the past studies may not necessarily be true for the whole sector or today due to changes over time. The co-operative sector is heterogeneous thus the policy-makers need to be made aware of that. No past study seems to recognise the dual role of SACCOS i.e. the SACCOS as belonging to both the co-operative and the financial sectors. SACCOS behaviour with respect to corporate savings, deposits, assets and loans is not known. What we know is that statutory reserve is legally defined as 25 per cent of the net profit. And that the dividend should not be in excess of 10 per cent of the realised surplus³ To increase the actual magnitude, some extra information is necessary. This study is undertaken to fill this gap.

Most past studies on savings determinants have focused on national savings. But their results may not necessarily be true for the whole economy or for a particular sector unless some adjustments are done. This is because the whole economy has different sectors with different propensities to save, hence need for sectoral analysis. Moreover, past studies have focused more on personal savings rather than corporate savings, where SACCOS may fully belong by the virtue that they are also both producing and consuming economic agents. SACCOS contribute to national GDP, capital formation and corporate savings hence specific sectoral analysis of the determinants of savings in this sector needs some investigation to assist in enhancing this contribution.

Sectoral analysis may be used to resolve debatable relationships e.g. interest rates and savings. This study will do that though not ^{the} for example given. The existence of these debates indicate the uncertainty among scholars as to the expected relationships. Thus it may be useful if we can also try to resolve some of these controversies using sectoral approach since most economies are not homogeneous. Even for factors that earlier empirical studies have given uniform results, sectoral analysis may give different results thus calling for different policy implications.⁴ This study seeks to give explanations as to the causes of those unexpected results.

Some studies have used variables which are less representative of what they actually wanted to look at. Hence the results are not truly representative and suffer from specification bias. For example, Rao and Sharma (1984) considered only companies' dividends and retained earnings policy but they never realised that credit unions (SACCOS) also pay dividends and retain funds hence they should have also been included in their sample⁵. Moreover, statutory reserves is also a part of corporate

savings but most past studies have ignored it. Its inclusion may or may not bring some differences. This study focuses on the determinants of savings, loans and deposits in SACCOS sector and why they vary across societies.

Notes:

1. - See for example:- Mutugu and Mwarania, Makanda, and most of the other articles in SCPs.
2. - See also SCPs.
3. - See the Co-operative act.
4. - Of course that is not a binding comment unless proved.
5. - Unless their study was specialising only in industries.
However, they never said so.

CHAPTER FOUR: THEORETICAL FRAMEWORK, HYPOTHESES AND RESEARCH

METHODOLOGY

4.1: INTRODUCTION

The literature review, economic theory and a few observational modifications provide the theoretical framework of this study presented in this chapter. Presented also are the hypotheses tested later using data from the Kenyan co-operative sector. The hypotheses tested were based on economic theory postulations, results from past empirical studies and the daily observations of the co-operative sector. This chapter also briefly discusses the nature of the data and sampling method used.

4.2: METHODOLOGIES REVIEW

Several models have been used to analyse the determinants of savings in the past. Though sectoral analysis has been done, it has not been on SACCOS. Assuming absence of association between independent variables, simple and multiple regression equation models have been used. But in certain cases the independent variables could also be functions of dependent variables hence two-way relationship. In such cases if single equation estimation is carried out, specification and simultaneous bias could occur, leading to inconsistent and biased estimates. Some past studies have such shortcomings. This study is set to correct those. According to Koutsoyiannis (1984), specification bias is introduced in a model when certain important variables are omitted from it with the objective of avoiding multicollinearity, rendering the model identified, for simplification or due to data limitations.

In real life, most economic variables are interdependent hence if single equation estimation is carried out then specification error is bound to be introduced. She also went ahead to define simultaneous bias as "the bias arising from the application of classical least squares to an equation belonging to a system of simultaneous relations." It originates from the violation of one of the assumptions of ordinary least squares (OLS). This OLS assumption states that "the disturbance term, U , is not correlated with the explanatory variables, X , i.e. $\text{COV}(XU) = 0$ " (Koutsoyiannis, 1984).

To eliminate the bias and take account of both direct and indirect effects, some studies have used simultaneous equation models e.g. Rao and Sharma (1984), Rana (1987), Furstenberg (1980).

However, these studies are too aggregative, looking at the national rather than sectoral savings. However, the functional form may differ incase of sectoral approach hence different results. This study focuses on SACCOS. The savings include both statutory reserves and retained earnings, unlike past studies which have used retained earnings as the only element of corporate savings. Examples of researchers who have used the simple and multiple regression models include:- Lazaros (1986), Giovannini (1985), Friend and Puckett (1972). As mentioned above one of the limitations of their studies has been the presence of simultaneous bias. This study has tried to eliminate that even though this does not claim lack of any other limitations.

4.3: DEFINITIONS AND SIMPLIFYING ASSUMPTIONS

4.3.1: Definitions

In general, savings is that portion of income (financial or non-financial), which is not used for the present consumption. Hence it is

referred to as "deferred consumption" (Rouse, 1983).

Corporate savings is identically defined as retained earnings plus statutory reserves. Although it is a residual, its absolute magnitude can functionally be determined, and that is the main focus of this study.

In estimating the savings function, we are actually estimating the savings demand function of a SACCO . When estimating the assets function, we are trying to maximise the profitability of a SACCO . We are actually analysing the allocative or distributive portfolio management in SACCOS. The assets are further functions of other variables. The loan and share-capital functions are also demand functions of these respective variables. In the process of estimating these functions, we are as well examining the SACCOS role as one of the financial intermediaries in terms of savings generation, mobilisation and investment allocation in the economy.

4.3.2: Assumptions (2)

The assumptions below help us to apply the theory of the firm to analyse this sector (which is otherwise a welfare or social sector with profit maximization not being the major objective). These assumptions include:-

- (i) A savings and credit co-operative society (SACCO) like any other economic agent will engage in production and consumption activities. It is on this basis that we specify an income-earning asset function (see section 4.4 below).
- (ii) Besides paying dividends and giving loans, SACCOS may generate more savings. If this assumption were absent then the savings function would have a weak base considering that it is absent in the legally defined objectives of SACCOS.

(iii) We also assume that there is zero risk incase of giving loans. Without this assumption, we would otherwise need to attach a risk adjustment coefficient to the loans function. The usefulness of this assumption is that the magnitude of that coefficient is rather difficult to estimate apriori.

4.4: METHODOLOGY AND MODEL

4.4.1: Model

To accommodate inter-relationships (direct and indirect linkages) simultaneous equation models will be used. The co-operative sector represents a real economic entity, hence we cannot expect to have orthogonal variables, but interdependent variables. Hence the use of simultaneous equation models is justified. Secondly, not all the explanatory variables are fixed, and neither are they independent of the disturbance term (Koutsoyiannis, 1984).

The models take the following structural forms:

Model (i) $S = f(P, A, I_u, L_d, L_a, L_o) \dots \dots \dots (1)$

$A = g(R, S, Shc, L_o) \dots \dots \dots (2), \text{ and}$

$f_{11}, f_{12}, f_{14}, f_{16}, g_{22}, g_{23} > 0 \text{ and } f_{13}, f_{15}, g_{21}, g_{24} < 0.$

The model is mathematically complete because it contains two endogenous variables (S and A) and two equations ((1) and (2)).

Model (ii) It has a system of equations which are also simultaneous and takes the following structural form:-

$Shc = h(M, Shc_{(t-1)}, Dd_{(t-1)}, Nb, La, AMCM) \dots \dots \dots (3)$

$La = K(Shc, Ld, I_u, L_o) \dots \dots \dots (4)$

$h_{31}, h_{32}, h_{33}, h_{34}, h_{35}, h_{36}, k_{41}, k_{42} > 0 \text{ and } k_{43}, k_{44} < 0$

This model is also mathematically complete because it contains two endogenous variables (Shc and La) and two equations ((3) and (4)).

Where,

- S - Savings (statutory reserve plus retained earnings)
- P - Net profit after tax
- A - Total income earning assets
- Iu - Investment undertakings
- Ld - Loan defaults
- La - Loans advanced to members
- Lo - Loans outstanding
- R - Rate of return on Assets (Profit/total assets)
- Shc - Members share Capital/Deposits
- M - Membership
- Shc_(t-1) - Lagged share Capital/Deposits
- Dd_(t-1) - Lagged dividend

Nb - Number of SACCOS branches

AMCM - Average monthly contribution per member

f₁₁, g₂₁, h₃₁, and k₄₁ - Expected partial derivatives.

Model (i)

The reduced form savings and Assets functions which are obtained by substituting equation (2) in equation (1) and vice versa can be presented as:-

$$S = a_0 + a_1 P + a_2 A + a_3 Iu + a_4 Ld + a_5 La + a_6 Lo + e_t \dots \dots \dots (5)$$

$$A = a_7 + a_8 R + a_9 S + a_{10} Shc + a_{11} Lo + n_t \dots \dots \dots (6)$$

Model (ii)

The reduced form share-capital/deposits and loan functions which are obtained by substituting equation (3) in equation (4) and vice versa,

equations or functions specified and estimated were as follows

$$(i) \quad S_t = f(B_0 + B_1 Y_t + B_2 r_t + B_3 f_t + B_4 e_t + B_5 D + B_6 S_{t-1})$$

$$(ii) \quad I_t = f(B_0 + B_1 Y_t + B_2 Y_{t-1} + B_3 M_t + B_4 M_{t-1} + B_5 e_t + B_6 R_t + B_7 D_t + B_8 I_{t-1})$$

where,

$B_0, B_1, B_2, B_3, \dots, B_8$ - Parameters.

S_t - total savings as a ratio of GDP in period t

Y_t - Real GDP growth rate in period t

r_t - Real ex post deposit rate in period t

f_t - Foreign saving as a ratio of GDP

e_t - Real exchange rate

D_t - Regime dummy

S_{t-1} - Lagged total saving as a ratio of GDP

I_t - Investment as a ratio of GDP in period t

Y_{t-1} - Lagged GDP growth rate

M_t - Real money growth rate in period t

M_{t-1} - Lagged real money growth rate

R_t - Real export rate

I_{t-1} - Lagged investment as a ratio of GDP.

He found positive but insignificant correlation between interest rate and savings. Coefficients of deposit rate, lagged savings and real GDP were also positive. Foreign saving had a negative impact. This is a very useful study for national policies but it suffers from aggregation problems hence it is less useful for sectoral policies.

Sandhu and Goswani (1986) looked at the determinants of commercial bank deposits in India. They wanted to know the determinants so that they would be able to suggest appropriate policies which could uplift

the rate of increase of deposits in order to meet the increasing demand for bank credits. The research also intended to reveal the determinants of demand for demand deposits in India. Two functions were specified and estimated. Cross-sectional data was used. The functions were estimated using a step by step multiple regression model.

The models were:-

$$(a) \quad D = f(Y_{or} \ Y_{na} \text{ and } Y_a, i_G, i_I, BC, i_D, D_{-1}, N)$$

$$(b) \quad DD = f(Y_{or} \ Y_{na}, Y_a, i_G, i_I, BC, N, i_T)$$

$$(c) \quad TD = f(Y, Y_{na}, Y_a, i_G, i_I, BC, i_T, TD_{-1})$$

Where,

- D - Deposits of all commercial banks
- Y - National income at current prices
- Y_{na} - Non-agricultural income at current prices
- Y_a - Agricultural income at current prices
- i_G - Yield on government securities
- i_I - Yield on variable dividend industrial securities
- BC - Bank credits of all scheduled commercial banks
- i_D - Interest rate of deposits
- D_{-1} - Lagged deposits
- N - Number of offices of all scheduled commercial banks
- DD - Demand deposits
- i_T - Interest rate on time deposits
- TD - Time deposits
- TD_{-1} - Lagged time deposits.

The results show that:-

- (i) Non-agricultural income, bank credit were positively correlated to the demand for bank deposits and significant at 1 per cent level,
- (ii) Yield on government securities was negatively correlated to demand deposits and significant at 5 per cent level,
- (iii) Demand deposits and number of bank offices were also positively correlated and significant at 1 per cent level, and
- (iv) Time deposits was positively correlated to non-agricultural income, interest rate, time deposits in the previous year, number of bank offices and bank credit. But only interest rate and previous year's deposits were significant at 1 per cent level. From the above, we notice that the methodology used could lead to simultaneity bias. The division of income into agricultural and non-agricultural may not be realistic (practical) in certain countries and may also bring multicollinearity problem hence affecting the estimates and the final policy implications thereafter. The reasons for the disaggregation were never spelt out hence one is bound to say that it was arbitrary.

Noormohammed (1986) analysed the problem of auditing of accounts in Kenyan co-operatives. He used certain statistical techniques to show the extent of the problem. Table analysis and comparison was used to verify the existence of and extent of that problem. The study revealed that one third of the co-operatives were upto date with their audits, one third were two years in arrears and the remaining were either several years in arrears or has never been audited. Reasons for the audit problems were given as:-

- (1) Some societies were newly registered,
- (2) Some were dormant,

- (3) Others were under liquidation,
- (4) Because auditors had not been appointed,
- (5) Books of societies were poorly kept due to lack of trained staff,
- (6) Books of accounts submitted were incomplete,
- (7) Negative attitudes of committee members and employees,
- (8) Lack of audit staff,
- (9) Staff transfers (MOCD), and,
- (10) Lack of transport for MOCD auditors.

The table below supports his findings stated earlier.

Table 22: Audit problem in Kenyan Co-operatives, 1985

Number of societies	Extent of the audit problem
462	Upto date
1215	Had backlog
199	Never audited
446	1 year arrears
391	2 years arrears
378	3 or more years arrears

Source: Noormohammed, 1986

This study gave as many reasons as possible for the audit arrears. It went ahead to show the distribution of audit problem in Kenyan Provinces and also gave the extent of the problem. However, the paper never clearly stated the type of date used. Secondly it assumed that all types of co-operatives suffer from audit problems and that the intensity is the same. We believe there are certain types of co-operatives that suffer from this problem more than others, hence disaggregation should have been done to help in formulating sectoral policies. Lastly,

he gave reasons for the audit arrears. But no attempt was made to analyse the part played by each so that we are able to know the most frequent and significant, so as to give them first priority in solution formulation.

Najafi, Torkamani and Soltani (1987) in Iran, carried out a survey to find out the trend of membership, causes of decline, problems and membership satisfaction in the agricultural co-operatives that were formed by graduates using loans given to them by the government. They used cross-sectional data and simple statistical techniques such as averages, percentages and tallying. They concluded that membership in co-operatives declined due to:-

- (i) Low level of income (46 per cent),
- (ii) Lack of co-operation among members (25 per cent),
- (iii) Hardness of work and lack of facilities (20 per cent), and
- (iv) Other problems (8 per cent).

The major problems these co-operatives faced included:-

- (i) Low returns (24 per cent),
- (ii) Low supply of inputs (24 per cent),
- (iii) Non-availability of capital (19 per cent),
- (iv) Long distance from main roads and lack of security (9 per cent),
- (v) Relations with centre (6 per cent),
- (vi) Lack of housing, insurance and medical facilities (6 per cent), and
- (vii) Other problems (4 per cent).

About 4 per cent never had problems and 4 per cent was accounted for by non-response. Only about 45 per cent of the members were satisfied.

The principal causes of dissatisfaction were:-

- (i) Low income (70 per cent), and
- (ii) Lack of direct relation between what the graduates had learned

and what they were doing then (30 per cent). The study focused only on agricultural co-operatives and ignored the rest. It is possible that other graduates could have formed other types of co-operatives unless the loans were restricted to only the formation of agricultural co-operatives. But of course the researchers have not informed the readers about that hence we are left doubting the focus.

Rana (1987) analysed the relationship and determinants of foreign capital, exports, savings and economic growth in the Asian region. He wanted to know the extent to which foreign capital affects economic growth or savings. His work was an improvement on Griffins and Eno's work of 1970 where multiple regression equation was used. He used a simultaneous equation model. In his use of foreign capital as an explanatory variable he assumed that, capital inflows augmented resources available, capital-output ratio is stable and that it had a favourable effect on economic growth. But these assumptions may not be fully realistic in LDC's. His use of simultaneous equation model was meant to remove the specification and simultaneity bias that earlier studies had suffered from thus leading to biased and inconsistent estimates.

Rana specified and estimated the following equations:-

$$(i) \quad GR = a_0 + a_1 AID + a_2 FPI + a_3 S + a_4 CX + a_5 CLF + u_t$$

$$(ii) \quad S = a_6 + a_7 AID + a_8 FPI + a_9 CX + a_{10} GDPN + a_{11} GR + V_t$$

$$(iii) \quad GR = b_0 + b_1 AID + b_2 FPI + b_3 CX + b_4 CLF + b_5 GDPN + e_t$$

$$(iv) \quad S = b_6 + b_7 AID + b_8 FPI + b_9 CX + b_{10} CLF + b_{11} GDPN + n_t$$

Where,

GR - Growth rate of GDP

AID - Foreign aid as a per cent of GDP

FPI - Foreign private investment (including long-term borrowing)
as a per cent of GDP

S - Gross domestic saving as a per cent of GDP
CX - Change in exports as a per cent of GDP
CLF - Change in labour force
GDPN - GDP per capita

u_t , v_t , e_t and n_t - Stochastic error terms, and $a_0, a_1, \dots, a_{11}$
and $b_0, b_1, \dots, b_{11}$ - Parameters of structural and reduced form
equations respectively.

Using ordinary least squares (OLS) and Indirect least squares (ILS) in the estimation, he concluded that:-

- (i) Domestic savings is positively correlated to economic growth, foreign capital, GDP per capita, change in exports and labour force,
- (ii) Aid and savings were negatively correlated, and,
- (iii) Aid and GDP per capita had significant coefficients while the rest were not significant at both 5 and 1 per cent levels.

This is quite a useful study and is very relevant for the current study especially on the issue of methodology. However, it is too aggregative. Secondly, it never clearly distinguished foreign capital and Aid variables. Thirdly, it never specified the measure of economic growth and labour-force used. Normally different countries and researchers use different measures and compositions in their analysis.

3.4: OVERVIEW OF THE LITERATURE

In a nut-shell, this section critically analyses the weaknesses and the strengths of past studies. It summarises the literature and knowledge gaps that exist in the world at large and in the area of co-operatives and in Kenya in particular, which the current study aims at filling, especially with respect to the latter. It responds

to questions like:- What is it that has been done in the world and in Kenya in this area of study in summary? What is it that has not been done? What is the gap? What further areas of research has been recommended by past studies? What are the strengths and weaknesses of these past studies? How biased, unbiased and relevant are their results? Which debates have been raised in the past and still persist? How does the current study intend to fill these gaps and resolve these debates?

2 ↘ From the previous section we can notice that very little work has been done on SACCOS in Kenya. There exist virtually no work on the determinants of savings, the case of SACCOS. The few studies on SACCOS are descriptive, general and non-empirical.¹ Their assertions have not been subjected to any empirical and statistical tests. More emphasis has been given to agricultural co-operative societies². But now that the service sector is becoming more important in the process of economic development, SACCOS should get more attention especially in the area of research. This study intends to do that at a micro-level.

1 ↘ Though useful, results of the past studies may not necessarily be true for the whole sector or today due to changes over time. The co-operative sector is heterogeneous thus the policy-makers need to be made aware of that. No past study seems to recognise the dual role of SACCOS i.e. the SACCOS as belonging to both the co-operative and the financial sectors. SACCOS behaviour with respect to corporate savings, deposits, assets and loans is not known. What we know is that statutory reserve is legally defined as 25 per cent of the net profit. And that the dividend should not be in excess of 10 per cent of the realised surplus³ To increase the actual magnitude, some extra information is necessary. This study is undertaken to fill this gap.

Most past studies on savings determinants have focused on national savings. But their results may not necessarily be true for the whole economy or for a particular sector unless some adjustments are done. This is because the whole economy has different sectors with different propensities to save, hence need for sectoral analysis. Moreover, past studies have focused more on personal savings rather than corporate savings, where SACCOS may fully belong by the virtue that they are also both producing and consuming economic agents. SACCOS contribute to national GDP, capital formation and corporate savings hence specific sectoral analysis of the determinants of savings in this sector needs some investigation to assist in enhancing this contribution.

Sectoral analysis may be used to resolve debatable relationships e.g. interest rates and savings. This study will do that though not the for/example given. The existence of these debates indicate the uncertainty among scholars as to the expected relationships. Thus it may be useful if we can also try to resolve some of these controversies using sectoral approach since most economies are not homogeneous. Even for factors that earlier empirical studies have given uniform results, sectoral analysis may give different results thus calling for different policy implications.⁴ This study seeks to give explanations as to the causes of those unexpected results.

Some studies have used variables which are less representative of what they actually wanted to look at. Hence the results are not truly representative and suffer from specification bias. For example, Rao and Sharma (1984) considered only companies' dividends and retained earnings policy but they never realised that credit unions (SACCOS) also pay dividends and retain funds hence they should have also been included in their sample⁵. Moreover, statutory reserves is also a part of corporate

savings but most past studies have ignored it. Its inclusion may or may not bring some differences. This study focuses on the determinants of savings, loans and deposits in SACCOS sector and why they vary across societies.

Notes:

1. - See for example:- Mutugu and Mwarania, Makanda, and most of the other articles in SCPs.
2. - See also SCPs.
3. - See the Co-operative act.
4. - Of course that is not a binding comment unless proved.
5. - Unless their study was specialising only in industries.
However, they never said so.

CHAPTER FOUR: THEORETICAL FRAMEWORK, HYPOTHESES AND RESEARCH METHODOLOGY

4.1: INTRODUCTION

The literature review, economic theory and a few observational modifications provide the theoretical framework of this study presented in this chapter. Presented also are the hypotheses tested later using data from the Kenyan co-operative sector. The hypotheses tested were based on economic theory postulations, results from past empirical studies and the daily observations of the co-operative sector. This chapter also briefly discusses the nature of the data and sampling method used.

4.2: METHODOLOGIES REVIEW

Several models have been used to analyse the determinants of savings in the past. Though sectoral analysis has been done, it has not been on SACCOS. Assuming absence of association between independent variables, simple and multiple regression equation models have been used. But in certain cases the independent variables could also be functions of dependent variables hence two-way relationship. In such cases if single equation estimation is carried out, specification and simultaneous bias could occur, leading to inconsistent and biased estimates. Some past studies have such shortcomings. This study is set to correct those. According to Koutsoyiannis (1984), specification bias is introduced in a model when certain important variables are omitted from it with the objective of avoiding multicollinearity, rendering the model identified, for simplification or due to data limitations.

In real life, most economic variables are interdependent hence if single equation estimation is carried out then specification error is bound to be introduced. She also went ahead to define simultaneous bias as "the bias arising from the application of classical least squares to an equation belonging to a system of simultaneous relations." It originates from the violation of one of the assumptions of ordinary least squares (OLS). This OLS assumption states that "the disturbance term, U , is not correlated with the explanatory variables, X , i.e. $COV(XU) = 0$ " (Koutsoyiannis, 1984).

To eliminate the bias and take account of both direct and indirect effects, some studies have used simultaneous equation models e.g. Rao and Sharma (1984), Rana (1987), Furstenberg (1980).

However, these studies are too aggregative, looking at the national rather than sectoral savings. However, the functional form may differ incase of sectoral approach hence different results. This study focuses on SACCOS. The savings include both statutory reserves and retained earnings, unlike past studies which have used retained earnings as the only element of corporate savings. Examples of researchers who have used the simple and multiple regression models include:- Lazaros (1986), Giovannini (1985), Friend and Puckett (1972). As mentioned above one of the limitations of their studies has been the presence of simultaneous bias. This study has tried to eliminate that even though this does not claim lack of any other limitations.

4.3: DEFINITIONS AND SIMPLIFYING ASSUMPTIONS

4.3.1: Definitions

In general, savings is that portion of income (financial or non-financial), which is not used for the present consumption. Hence it is

referred to as "deferred consumption" (Rouse, 1983).

Corporate savings is identically defined as retained earnings plus statutory reserves. Although it is a residual, its absolute magnitude can functionally be determined, and that is the main focus of this study.

In estimating the savings function, we are actually estimating the savings demand function of a SACCO . When estimating the assets function, we are trying to maximise the profitability of a SACCO . We are actually analysing the allocative or distributive portfolio management in SACCOS. The assets are further functions of other variables. The loan and share-capital functions are also demand functions of these respective variables. In the process of estimating these functions, we are as well examining the SACCOS role as one of the financial intermediaries in terms of savings generation, mobilisation and investment allocation in the economy.

4.3.2: Assumptions (2)

The assumptions below help us to apply the theory of the firm to analyse this sector (which is otherwise a welfare or social sector with profit maximization not being the major objective). These assumptions include:-

- (i) A savings and credit co-operative society (SACCO) like any other economic agent will engage in production and consumption activities. It is on this basis that we specify an income-earning asset function (see section 4.4 below).
- (ii) Besides paying dividends and giving loans, SACCOS may generate more savings. If this assumption were absent then the savings function would have a weak base considering that it is absent in the legally defined objectives of SACCOS.

(iii) We also assume that there is zero risk incase of giving loans. Without this assumption, we would otherwise need to attach a risk adjustment coefficient to the loans function. The usefulness of this assumption is that the magnitude of that coefficient is rather difficult to estimate apriori.

4.4: METHODOLOGY AND MODEL

4.4.1: Model

To accommodate inter-relationships (direct and indirect linkages) simultaneous equation models will be used. The co-operative sector represents a real economic entity, hence we cannot expect to have orthogonal variables, but interdependent variables. Hence the use of simultaneous equation models is justified. Secondly, not all the explanatory variables are fixed, and neither are they independent of the disturbance term (Koutsoyiannis, 1984).

The models take the following structural forms:

$$\text{Model (i)} \quad S = f(P, A, I_u, L_d, L_a, L_o) \dots \dots \dots (1)$$

$$A = g(R, S, Shc, L_o) \dots \dots \dots (2), \text{ and}$$

$$f_{11}, f_{12}, f_{14}, f_{16}, g_{22}, g_{23} > 0 \text{ and } f_{13}, f_{15}, g_{21}, g_{24} < 0.$$

The model is mathematically complete because it contains two endogenous variables (S and A) and two equations ((1) and (2)).

Model (ii) It has a system of equations which are also simultaneous and takes the following structural form:-

$$Shc = h(M, Shc_{(t-1)}, Dd_{(t-1)}, Nb, L_a, AMCM) \dots \dots \dots (3)$$

$$L_a = K(Shc, L_d, I_u, L_o) \dots \dots \dots (4)$$

$$h_{31}, h_{32}, h_{33}, h_{34}, h_{35}, h_{36}, k_{41}, k_{42} > 0 \text{ and } k_{43}, k_{44} < 0$$

This model is also mathematically complete because it contains two endogenous variables (Shc and La) and two equations ((3) and (4)).

Where,

S - Savings (statutory reserve plus retained earnings)

P - Net profit after tax

A - Total income earning assets

Iu - Investment undertakings

Ld - Loan defaults

La - Loans advanced to members

Lo - Loans outstanding

R - Rate of return on Assets (Profit/total assets)

Shc - Members share Capital/Deposits

M - Membership

Shc_(t-1) - Lagged share Capital/Deposits

Dd_(t-1) - Lagged dividend

Nb - Number of SACCOS branches

AMCM - Average monthly contribution per member

f₁₁, g₂₁, h₃₁, and k₄₁ - Expected partial derivatives.

Model (i)

The reduced form savings and Assets functions which are obtained by substituting equation (2) in equation (1) and vice versa can be presented as:-

$$S = a_0 + a_1 P + a_2 A + a_3 Iu + a_4 Ld + a_5 La + a_6 Lo + e_t \dots \dots \dots (5)$$

$$A = a_7 + a_8 R + a_9 S + a_{10} Shc + a_{11} Lo + n_t \dots \dots \dots (6)$$

Model (ii)

The reduced form share-capital/deposits and loan functions which are obtained by substituting equation (3) in equation (4) and vice versa,

can be written as follows:-

$$Shc = b_0 + b_1 M + b_2 Shc_{(t-1)} + b_3 Dd_{(t-1)} + b_4 Nb + b_5 La + b_6 AMCM + u_t \dots \dots (7)$$

$$La = b_7 + b_8 Shc + b_9 Ld + b_{10} Iu + b_{11} Lo + v_t \dots \dots \dots (8)$$

Where, a_1 and b_1 are the coefficients and e_t , n_t , u_t , and v_t are error terms. The rest of the variables are as defined earlier.

4.4.2: Identification problem

For any simultaneous equation model to have unique estimates and be estimated, both the necessary and sufficient conditions of identifiability must be satisfied. The necessary conditions is the order condition. The order condition states that "in a model of M simultaneous equations, in order for an equation to be identified, the number of predetermined variables excluded from the equation must not be less than the number of endogenous variables included in that equation less one, i.e. $K - k \geq m-1$,

Where,

K - Number of predetermined variables in the model,

k - Number of predetermined variables in a given equation,

m - Number of endogenous variables in a given equation, and

M - Number of endogenous variables in the model" (Gujarati, 1978, pp 360).

From table 23 below, we can notice that all the equations in our models are overidentified and therefore all the models are also overidentified. The order condition is thus satisfied.

Table 23: Order condition of Identifiability

Model	Equation	No. of predetermined variables excluded (K - k)		No. of Endogenous variables included less one (m - 1)	Identified?
i	1	2	>	1	Over.....
	2	4	>	1	Over.....
ii	3	3	>	1	Over.....
	4	5	>	1	Over.....

Source: Own computation

The order condition is just a necessary condition for identification. The sufficient condition is the rank condition which states that "in a model containing M equations in M endogenous variables, an equation is identified if and only if at least one non-zero determinant of order (M - 1) (M - 1) can be constructed from the coefficients of the variables (both endogenous and predetermined) excluded from that particular equation but included in the other equations of the model" (Gujarati, 1978 pp 352). Examples of such determinants in our system are $g_{22} > 0$ incase of equation (1) and $f_{13} < 0$, $f_{14} > 0$ incase of equation (2). Hence that sufficient condition is also satisfied.

4.4.3 Estimation Methodology

From section 4.4.2, using both order and rank conditions of identifiability, all the equations were identified thus all models were also identified. Both the necessary and sufficient conditions were satisfied hence the models could be estimated. Both the models were estimated using two stage least squares (2SLS). If we had used indirect least squares (ILS) in estimating these models then we may

have gotten more than one value for one particular coefficient in the equations (2) and (4), since the equations were overidentified. Hence it was not used.

Two stage least squares (2SLS) involves the application of ordinary least squares (OLS) in two stages¹. Stage one involves getting rid of the likely correlation between the dependent variable in equations (1) and (3) and the stochastic error terms in equations (2) and (4) respectively. / Stage two involves using OLS to estimate the purified functions thus getting consistent and unbiased estimates. In all the equations, the error term was included to capture all the effects of the omitted random variables. But since the expected value of the error terms is normally assumed to be zero, the impact of these omitted variables was accounted for by the constant terms. Tests of significance were carried out to confirm or disconfirm the hypotheses stated in section 4.5 below.

Note: The variable La, appeared as only explanatory variable in model (i) and was endogenous in model (ii). This was to capture both the objectives of this study and those of SACCOS. We tried to eliminate multicollinearity in certain equations but this could not be done completely because the models would have been left meaningless and insignificant, with all the vital variables of the hypotheses eliminated. Thus specification bias would occur. The following extract supports our stand:-

"Multicollinearity is not a condition that either exists or does not exist in economic function, but a phenomenon inherent in most relationships due to the nature of economic magnitude. There is no conclusive evidence concerning the degree of collinearity which,

if present will affect seriously the parameter estimates" (Koutsoyiannis, 1984, pp 233).

4.5: DETERMINANTS AND THE HYPOTHESES

4.5.1: Determinants of Savings

Bearing in mind the earlier assumptions, determinants of SACCOS' savings, deposits and loans are discussed below. This discussion offers a justification to the expected signs of the coefficients hypothesized in the models.

Membership:-

This is composed of the registered, subscribers of the society i.e. persons who contribute towards the deposits/share capital of the society (Pearce, 1983). Increased membership implies increased demand for deposits and higher chances of receiving more contributions thus higher deposits are expected. Higher deposits may lead to increased demand for physical assets and loans. From these, higher profits are likely and the higher profits level will increase corporate savings (h_{31} , g_{23} and $f_{11} > 0$).

Loan defaults:-

Loan defaulting is the failure to pay back the advance either in the right time, or fail to pay it back completely. Higher loan defaults implies higher need for more retained earnings for liquidity position and investment needs. It also means lower profits. Hence the societies will increase the loaning rate in order to compensate the reduced profits with increased interest payments (f_{14} and $K_{42} > 0$).

Loans advanced to members:-

A loan is an advance of finance by a lender to a borrower

(Pearce. 1983). Higher deposits increases the capacity of a society to give loans. If the demand for investment undertaking is high then less loanable funds will be available and even the allocation/demand for corporate saving will be reduced. When the corporate savings or its demand is reduced, the society's liquidity and profitability in the future is threatened hence they tend to have an incentive to increase the amount of loans given to members, from which they can charge interest to add to their funds ($h_{31} > 0$, f_{13} , K_{43} and $f_{15} < 0$).

Profit:

According to Pearce (1983), it is "the difference between revenue generated from the sale of output and the full opportunity cost of the factors used in the production of that output". Profit is the income of SACCOS. As it rises, savings will also rise. Increased savings increases the demand for assets and the need to diversify the portfolio (f_{11} and $g_{22} > 0$).

Assets:-

Pearce, (1983) defines an asset as "an entity possessing market or exchange value, and forming part of the wealth or property of the owner". He designates two types of assets:-

- (i) Real assets - tangible resources like plant, buildings and land, yielding services in production or directly to consumers.
- (ii) Financial assets - include money, bonds and equities, and which are claims or titles to receive income or to receive value from others. There exists both types in SACCOS. Rise in assets increases the demand for savings. The corporate savings (own funds) are used to maintain the assets of the societies. Thus as

the society acquires more assets it allocates more to corporate savings. Furthermore, some of these assets are profitable and this will increase the amount of revenue profits and further increasing the amount of corporate savings ($f_{12} > 0$).

Lagged dividend:-

A dividend is a payment to a shareholder in a SACCO either in the form of cash or shares. A cash dividend is a payment made out of profits after corporation tax and statutory reserves. However, the dividends are subject to income tax. Lagged dividend is dividend in the previous year. Higher level of lagged dividend is an incentive and increases demand for deposits in the current period. Furthermore, if it is viewed as transitory income, it encourages more savings. People tend to save more of transitory income than permanent income (Furstenberg, 1980). Lagged variables are used as explanatory variables because adjustment process may spread over multiple of periods, and because of stable behaviour of most organizations that pay returns. Stable dividend policy eliminate confrontation with members (h_{32} and $h_{33} > 0$). (De Melo, 1980, Qureshi, 1983 and Rao, 1984).

Number of branches

Branches is the provisions of SACCOS services through a network of offices owned by a single SACCO. Opening a branch in a SACCO lacking area (or organisation) would encourage its inhabitants (or employees) to transfer apart of their wealth from other forms of assets to deposits. It implies higher accessibility, increased membership and demand and thus increased deposits/share capital ($h_{34} > 0$).

Skill of Management and Employees:-

Skill refers to a fairly specific form of training. If it is effective, it may improve the profitability of SACCOS, productivity of their resources and retained earnings (Relly, 1979). It is observable that shares of profitable SACCOS are of higher demand and hence increased deposits and loans as more members get attracted.

The other variables

Loan outstanding is an advance of finance that is yet to be repaid back. It is the difference between loans given out in a particular year and the amount repaid back in that same year. If it is very high then the society's liquidity position will be threatened hence higher demand for retained earnings or corporate savings ($f_{16} > 0$). SACCOS with very high rates of return may not see the need to acquire more assets and instead concentrate on giving more loans to their members. Where rate of return may refer to the earnings from the investment of capital and earnings are expressed as a proportion of the outlay. The capital could include both human and non-human resources. Others have defined it as the ratio of profit to capital employed (Pearce, 1983).

SACCOS might even sell out some assets already acquired. Increased rate of return may therefore reduce the amount of assets acquired or the rate of acquiring these new assets.

Share capital is the sum lent to certain financial institutions e.g. SACCOS, banks, building societies and finance houses on terms allowing withdrawal with or without notice or providing for repayment after specified periods (see Pearce, 1983). Pearce went ahead to define share capital as "equities in the issued capital of an organization

which are held on terms that make the holder a member of company or firm, entitled to vote at annual meetings and elect directors, and to participate through dividends in the profit of the company or firm. Share capital may be viewed as apart of the society's assets. Secondly it may also be used for the acquisition of other physical assets. Thus as it increases, the assets of a society also increases. Since loans are given from society's share capital which may be apart of the assets and since it is from it that societies get some incomes to acquire more assets, the assets will reduce as loan outstanding increases (g_{21} and $g_{24} < 0$, $g_{23} > 0$).

The loans advanced to members is usually paid back with interest hence the more it is the higher the interest. Apart of which (interest payments) is converted to members deposits or share capital, thus as it increases share capital may also rise. The rate of contribution per month by each member will tend to raise the level of share capital. As it rises, the deposit will as well rise. The amount of loans given out to members depends on deposits. As deposits rise it will also tend to rise. Lastly, higher loan outstanding may discourage or constrain SACCOS from giving more loans (h_{35} , h_{36} , $K_{4-1} > 0$ and $K_{41} < 0$).

4.5.2: Hypotheses

From the discussion above and earlier on, several major hypotheses can be drawn. These hypotheses will be tested for confirmation or disconfirmation in this study. They include:

- (1) There is a positive relationship between profits and corporate savings in SACCOS. And that profit is one of the main determinants of corporate savings,

$$\frac{\partial S}{\partial P} > 0$$

- (2) There is a positive relationship between membership, lagged dividend and share capital/deposit. And that membership is one of the main explanatory variables in the share-capital/deposit function,

$$\frac{\partial \text{Shc}}{\partial \text{M}} \text{ and } \frac{\partial \text{Shc}}{\partial \text{Dd}_{(t-1)}} > 0$$

- (3) There is a positive relationship between the share-capital/deposits and loans advanced to members,

$$\frac{\partial \text{La}}{\partial \text{Shc}} > 0.$$

In the process of testing these main hypotheses, other minor hypotheses will also be tested. The minor hypotheses are indicated by the partial derivatives spelt out clearly below each of the equations stated in the models. Certain partial derivatives were not regarded as hypotheses because they could not represent refutable hypotheses.

4.6: DATA AND SAMPLING METHOD

Primary cross-sectional data have been used mainly. They were collected from the Ministry of Co-operative Development (MOCD). For certain variables the data could not be found at the MOCD hence we had to visit the SACCOS to collect the needed information. However, no well designed questionnaires were administered in this study. And because of audit, inactiveness and liquidation problems, SACCOS surveyed have been conveniently selected from active and audited ones. This has ensured the availability and reliability of the used data. In using cross-sectional data we have assumed that the propensity to save is constant.

Cross-sectional data has been preferred to time-series data in this area because the latter exist in bits as a result of poor book-keeping and audit arrears problems. However, cross-sectional data is easily available and consistent for all the required variables in the selected societies. And in case of any degrees of freedom problems, we simply can increase the sample size.

In total, the data has been collected from three main sources:- SACCOS themselves, MOCD and the Kenya Union of Savings and Credit Co-operative. (KUSCCO). This diversity in the sources has ensured reliability, authenticity, availability and accuracy of the data used. In certain cases, counter-checking of data was done from time to time to correct errors in the figures earlier given. The SACCOS annual reports and Newsletters normally prepared by either the internal auditors of the SACCOS or any appointed auditors and publishers were used as some of the sub-sources of information². The Ministry of Co-operative Development is the organisation that registers, supervises and liquidates SACCOS. And at times they also audit their accounts. The MOCD must approve the auditors appointed by the societies as well. Hence the SACCOS must submit to MOCD all the annual audited reports, that explains the availability of data there. The KUSCCO also acts on behalf of certain SACCOS in the preparation of their books of accounts especially small SACCOS which cannot afford to hire full-time auditors. Thus there exists reliable data with this organisation. The amalgamation of all these sources has ensured good quality and reliable data. This will also reflect itself in good results.

Simple random technique aided by a random number table has been used to select the SACCOS surveyed in this study. Though a sample of 30 is usually regarded as satisfactory for statistical estimation, we

surveyed 50 SACCOS in order to improve on our degrees of freedom. This has ensured that the sample is adequately representative. Secondly, the large size of the sample has ensured that the sampling distribution is normal. There is agreement among statisticians and econometricians that the sampling distribution is normal as long as the sample size is 30 and above. This is satisfied in this study. Thirdly, the large sample has also ensured that the proportion condition is satisfied. Our sample is about 12 per cent of all SACCOS in Nairobi hence in excess of the 5 per cent proportion, which is the statistical requirement for medium-sized population. The sample was drawn from a finite population since the total number of SACCOS is known. Whenever a SACCO drawn was found to be having audit arrears, it was replaced by another one. This was meant to ensure availability of data as mentioned earlier. The list of SACCOS in the co-operative directory comprised the sample frame from which the 50 SACCOS were drawn.

It should also be noted that the whole of the 50 SACCOS surveyed in this study have all been drawn only from Nairobi Province. This is because of time and resource constraints. Although the sample has concentrated in Nairobi, Nairobi province contains the majority of SACCOS in Kenya³. Furthermore, most of the co-operative societies in Nairobi are SACCOS hence it is a representative area. She has all categories of SACCOS which are of interest in this study. Therefore nothing is lost by having concentrated in that locality. Other provinces have SACCOS but they are scattered everywhere hence the cost of observing them (in terms of time and money) would be higher than the benefit that would accrue from their study. Thus those other provinces were never surveyed.

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Notes:-

1 - OLS results are also presented in chapter five. See tables 43, 44, 45 and 46.

2 - For examples, see appendix 8

3 - For confirmation, see the provincial distribution of SACCOS in Kenya presented in chapter two.

CHAPTER FIVE: EMPIRICS AND ANALYSIS

5.1: INTRODUCTION

This chapter presents the results of this study in two major sections. The first section (5.2) presents the descriptive statistics. This include information on corporate savings, profits, assets, investment, returns, age of society, share capital/deposits, membership, dividend, profitability, loans, share withdrawals or refunds, average monthly contribution and number of branches. Section two (5.3) presents the econometric results, tests carried out and the interpretations made about the results.

In chapter four, we presented the methodology used in analysing the determinants of savings, including the models and hypotheses. The proceeds of that chapter are presented in section two (5.3) of this chapter. The data used in the analysis are in the appendixes 2 and 3. The results are used to test the hypotheses, and forms the basis for responses to the major hypotheses and policy implications. To find out which variables are significant and which ones are not, the student's t-distribution was used. Although the sample is large enough for us to apply z-distribution, it was found easy to compare the t-critical and the calculated t's which were presented in the computer-runs. The test of the presence of autocorrelation was also done using the Durbin-Watson statistic. Other tests carried out are as they appear in section 5.3. All the tests were carried out at 95 per cent level of significance. However, it should be noted that 99 per cent level can also be used. But this would increase the chances of making type II error i.e. accepting a hypothesis when it should have been rejected. Because of that limitation it was never used here.

The signs of the explanatory variables will explain their relationships with the dependent variables. The negative sign implies that an increase in that variable reduces the dependent variable. A positive sign implies that an increase in a variable increases the dependent variable and vice versa. A variable found to be significant implies that it plays a major role in the changes that occur on the dependent variable. Those found to be insignificant play minor role in the changes. The actual magnitude of these coefficients are the marginal changes in the respective dependent variable due to a unit change in the explanatory variable. For example, f_{11} is the marginal change in savings due to a unit change in profits of a society.

5.2 DESCRIPTIVE STATISTICS

5.2.1 Savings (S)

From the 50 SACCOS surveyed, 37 of them had savings between Kshs.2,306 - 440,119, and that is about 74 per cent. The highest corporate savings was Kshs.8,758,593, while the lowest was Kshs.2,307. This gave a range of 8,756,286. The average (mean) savings was found to be Kshs.495,783. The variance, standard deviation and coefficient of variation are as shown in appendix 4. From the frequency table (24) below, the most frequent value of savings is the 2306 - 440,119 class, followed by the 440,120 - 877,933 class. The two classes represent about 86 per cent of all the SACCOS surveyed. Therefore, for policies aimed at enhancing saving in this sector, they should be focused on SACCOS in this category. Appendix 8 shows the sources of this variable.

Table 24:- Savings, 1986

Amount (Kshs.)	Frequency (Number of Societies)
2,306 - 440,119	37
440,120 - 877,933	6
877,934 - 1,315,747	2
1,315,748 - 1,753,561	1
1,753,562 - 2,191,375	1
2,191,376 - 2,629,189	2
2,629,190 and above	1
Total	50

Source: Own Survey.

5.2.2 Profits (P)

The highest value of profits recorded is Kshs.7,428,562 and the lowest is Kshs.6,416, giving a range of Kshs.7,422,146. The mean profit is Kshs.855,111 with a standard deviation of 1323.6. Frequently, most value of profits lie between Kshs.6,415 and 377,521. This class interval represents 66 per cent of all the societies surveyed. This is followed by the open class interval of Kshs.2,233,057 and above, which represents 12 per cent of the surveyed societies.

Table 25: Profits, 1986

Amount (Kshs.)	Frequency (Number of Societies)
6,415 - 377,521	33
377,522 - 748,628	4
748,629 - 1,119,735	2
1,119,736 - 1,490,842	3
1,490,843 - 1,861,949	1
1,861,950 - 2,233,056	1
2,233,057 and above	6
Total	50

Source: Own Survey.

5.2.3 Assets (A)

Total assets of most societies were between Kshs.62,495 and 4,050,599. That class interval covered 39 SACCOS and that was about 78 per cent of the societies surveyed in this study. The highest value of assets recorded was Kshs.79,824,593 while the lowest was Kshs.62,496 giving a range of Kshs.79,762,097. The mean value was Kshs.6,370,840 (for the exact assets see appendix 8).

Table 26: Total Assets, 1986

Amount (Kshs.)	Frequency (Number of Societies)
62,495 - 4,050,599	39
4,050,600 - 8,038,704	4
8,038,705 - 12,026,809	2
12,026,810 and above	5
Total	50

Source: Own Survey.

5.2.4 Investment (Iu)

This variable represents the investments which societies undertook during 1986. The highest value of investment undertaken that year was to the tune of Kshs.2,494,000 and the lowest was zero (for about 8 SACCOS). The frequent value was between Kshs. 0 and 124,699, covering 39 SACCOS i.e. 78 per cent of all the SACCOS surveyed. The value of Kshs.249,399 and below accounted for about 90 per cent of all the societies in the sample. The mean value of investment undertaken was Kshs.123,420. Most of these investments were shares bought from the co-operative bank, KUSCCO and the co-operative Insurance Services Limited, and a few were of physical assets (see appendix 8).

Table 27: Investment Undertaken, 1986

Amount (Kshs.)	Frequency (Number of Societies)
0 - 124,699	39
124,700 - 249,399	6
249,400 - 374,099	3
374,100 - 498,799	0
498,800 - and above	2
Total	50

Source: Own Survey
5.2.5 Rate of Return (R)

Rate of return was taken to be the ratio of profit to total assets of the society. It could be a measure for evaluating the feasibility of undertaking SACCOS as an investment project. The highest value recorded was 1.47 and the lowest was 0.002, giving a range of 1.468. The mean value was 0.3656 and the most frequent class was 0.0744 - 0.1477, covering only 13 SACCOS which is 26 per cent of the societies. This was one of the variables that appeared normally distributed as can be seen in the table below.

Table 28: Rate of Return, 1986

Ratio	Frequency (Number of Societies)
0.001 - 0.0743	5
0.0744 - 0.1477	13
0.1478 - 0.2211	6
0.2212 - 0.2945	3
0.2946 - 0.3679	3
0.3680 - 0.4413	5
0.4414 - 0.5147	3
0.5148 - 0.5881	2

0.5882 - 0.6615	3
0.6616 - 0.7734	2
0.7735 and above	5
Total	50

Source: Own Survey

5.2.6 Age of Societies (Ag)

Though co-operative movement was in existence before independence, none of the SACCOS surveyed was in existence earlier than 1969. Infact, the majority of the SACCOS surveyed were started between 1973 and 1979. The oldest society surveyed was started 17.67 years ago while the youngest was registered 1.42 years ago. The mean age was 10.78 years and the frequest class is between 14.45 - 16.07 as shown in the table below:-

Table 29: Age of Societies, 1986

Age in years	Frequency (Number of Societies)
1.41 - 3.03	1
3.04 - 4.66	5
4.67 - 6.29	2
6.30 - 7.92	4
7.93 - 9.55	8
9.56 -11.18	3
11.19 -12.81	6
12.82 -14.44	7
14.45 -16.07	11
16.08 -17.70	3
Total	50

Source: Own Survey

5.2.7 Share Capital/Deposits (Shc)

It was found that societies issued share capital alone, deposits alone or both. This study took the sum of the two variables to get the value of the societies incase of the existence of both. The highest value of share capital deposits recorded was Kshs.259,298,684 and the lowest was Kshs.154,090, giving a range of Kshs.259,144,594. The frequent class was Kshs.154,089 - 26,068,547 and this covered 40 societies, an equivalent of 80 per cent. This indicates that majority of SACCOS are not large in terms of share capital. The mean share capital was Kshs.250,029,200. But this may be a misleading figure since 80 per cent of all the SACCOS surveyed do not have that amount of share capital. However, for statistical purposes this figure has been used.

Table 30: Share Capital/Deposits, 1986

Amount (Kshs)	Frequency (Number of Societies)
154,089 - 26,068,547	40
26,068,548 - 51,983,006	5
51,983,007 - 77,897,465	1
77,897,466 - 103,811,924	1
103,811,925 and above	3
Total	50

Source: Own Survey

5.2.8 Membership (M)

This is a very important variable in the societies. Without members, there can be no co-operatives. Because of the existence of many societies, lack of co-operative education and restriction of membership by either employment or profession, the membership in societies is quite low. The highest value is 37,948 and the lowest was 21. The average membership is 3,521 and the modal class is 20-1915, covering 34 societies i.e. 68 per cent of all the surveyed SACCOS. The two classes of 20 - 1915 and 1916 - 3811 covers about 84 per cent of all the societies surveyed. The study never attempted to look at the participation of members. However, it was noted that all the officials were members and most of the societies were ran by these officials voluntarily without pay except for the committee honoraria, which is given once in a year. Conditions for membership registration are shown on appendixes 5 and 6.

Table 31: Membership, 1986

Number	Frequency (Number of Societies)
20 - 1915	34
1916 - 3811	8
3812 - 5707	2
5708 and above	6
Total	50

Source: Own Survey

5.2.9 Dividend (Dd)

This is one of the benefits members get from the societies besides interest and loans. The highest value recorded was Kshs.5,300,000 and the lowest was 0. The modal value was between Kshs. 0 and 246,999, representing 64 per cent of all the societies surveyed. The mean dividend was to the tune of Kshs.925,280, and seven societies did not pay out any dividend in 1986 (this represented 14 per cent of SACCOS surveyed).

Table 32 Dividend, 1986

Amount (Kshs)	Frequency (Number of Societies)
0 - 264,999	32
265,000 - 529,999	5
530,000 - 794,999	0
795,000 - 1,059,999	2
1,060,000 - 1,324,999	1
1,325,000 - 1,589,999	2
1,590,000 - 1,854,999	5
1,855,000 and above	3
Total	50

Source: Own Survey

5.2.10 Profitability Measure (P/Shc)

There are many measures of profitability. But for this study, the ratio of profits to share capital or deposits was taken as the measure. The most profitable SACCOS recorded a ratio of 0.1170 and the least recorded a ratio of 0.0012, giving a range of 0.1158. The mean value of this ratio was 0.0516. It can be noted that this ratio is evenly distributed as is portrayed in the table below.

Table 33: Ratio of Profits to Share Capital/Deposits, 1986

Ratio	Frequency (Number of Societies)
0.0011 - 0.01267	6
0.01268 - 0.02425	8
0.02426 - 0.03583	4
0.03584 - 0.04741	6
0.04742 - 0.05899	4
0.05900 - 0.07057	7
0.07058 - 0.08215	6
0.08216 - 0.09373	6
0.09374 - 0.10531	2
0.10532 and above	1
Total	50

Source: Own Survey.

5.2.11 Share Withdrawals/Refund (Shw)

From the 50 SACCOS surveyed, only 2 had no members withdrawing from the societies. The rest had members withdrawing from the societies due to:-

- (i) Change of employment,
- (ii) Retirement, and
- (iii) Other family commitments

Though it is against the co-operative act to allow partial withdrawal, one society was found to be practising partial withdrawal. Partial withdrawing means a member is refunded apart of his/her deposits and continues to be a member. It was also found that members could withdraw but may rejoin later after 3, 6, or 12 months. This duration varied from one society to the other. But the three mentioned above were the most frequent ones. However, the actual frequency was never tabulated in this study.

The highest value of share refund recorded was Kshs.8,394,395 and the lowest was 0. The mean value was Kshs.804,726. The modal class was Kshs. 0-209,864, having 25 societies, and that is 50 per cent of the surveyed ones. The table below shows the rest of the distribution.

Table 34: Share Withdrawals/Refunds, 1986

Amount (Kshs.)	Frequency (Number of Societies)
0 - 209,860	25
209,861 - 419,720	12
419,721 - 629,580	3
629,581 - 839,440	1
839,441 - 1,049,300	1
1,049,301 - 1,259,160	2
1,259,161 and above	6
Total	50

Source: Own Survey.

5.2.12 Monthly Contribution (AMCM)

The average monthly contribution per member is a very important factor in the building up of the share capital of a society. The highest value recorded was Kshs. 566 per month, while the lowest was Kshs. 45 per month, giving a range of Kshs. 521. The mean value was got to be Kshs.156. The modal class was 97 - 148, covering 21 societies and that was 42 per cent of all the societies surveyed. About 80 per cent of the societies had average monthly contribution per member which is below Kshs.200, indicating a very low rate of savings in societies.

Table 35: Average Monthly Contribution Per Member, 1986

Amount (Kshs.)	Frequency (Number of Societies)
44 - 96	12
97 - 148	21
149 - 200	7
201 - 252	2
253 - 304	5
305 and above	3
Total	50

Source: Own Survey.

5.2.13 Number of Branches (Nb)

This could be one of the variables which plays some role in the mobilisation of savings because it increases members accessibility to the financial system. A society with only a head office was regarded as having one branch. The highest number of branches was 384 and the lowest was 1. About 8 societies had only one branch. The mean value of branches was 18 and the modal class was 0 - 9 and this covered 37 societies, or 74 per cent of all the societies surveyed. The classes 0 - 9 and 10 - 18 covered 84 per cent of all the societies.

Table 36: Number of Branches, 1986

No.	Frequency (Number of Societies)
0 - 9	37
10 - 18	5
19 - 27	1
28 - 36	2
37 - 45	2
46 - and above	3
Total	50

Source: Own Survey.

5.2.14: LOANS (La, Ld and Lo)

This sub-section discusses loan outstanding, defaults, loans advanced to members, types, and purposes. The loan outstanding is the difference between loans given to members in a particular year and the repayment made in that same year. Thus it is the amount of loans not yet paid back in that respective year. Its impact will be discussed in the section 5.3. The highest value of Loan Outstanding recorded in this study was Kshs. 248,881,851 and the lowest Kshs.129,102, giving a range of Kshs. 248,752,749. The most frequent class was Kshs. 129,101 - 12,616,737, representing 70.7 per cent of all the societies surveyed. The number of societies in that class was 34. Moreover, the loan outstanding to the tune of Kshs. 25 millions and below covered about 85 per cent of all the surveyed societies. The mean value was Kshs.25,261,500.

Table 37: Loan Outstanding, 1986

Amount (Kshs.)	Frequency (Number of Societies)
129,101 - 12,616,737	34
12,616,738 - 25,104,374	7
25,104,375 - 37,592,011	4
37,592,012 - 50,079,648	2
50,079,649 and above	3
Total	50

Source: Own Survey.

Loan defaults is not a rare phenomenon in this sector. From the 50 SACCOS surveyed only 15 societies had no defaulters. The rest had loan defaults range between Kshs.1,335,968 to 445. No attempt was made to tabulate the causes of defaults, but they include:- change of

jobs, less tightened conditions in the loan policy, winding up of sister organizations and non-insurance of the society's funds. Most managements have attempted to recover these loans from the guarantors. However, this is a disincentive to a faithful member who is normally provoked so that he can bring forward the defaulters. The mean value of loan defaults per society is to the tune of Kshs.216,640 and the modal class is Kshs. 0 - 66,798, covering 25 societies or 50 per cent. About 60 per cent of all the societies surveyed had loan defaults which is below Kshs.134,000.

Table 38: Loan Defaults, 1986

Amount (Kshs.)	Frequency (Number of Societies)
0 - 66,798	25
66,799 - 133,596	5
133,597 - 200,394	3
200,395 - 267,192	1
267,193 - 333,990	2
333,991 - 400,788	3
400,789 and above	11
Total	50

Source: Own Survey.

Loans advanced to members is one of the most important variable in this study. Its function is estimated in section 5.3. The highest value of loans recorded was Kshs.166,137,802 and the lowest was Kshs.113,800, giving a range of Kshs.166,024,002. The most frequent class is 113,799 - 8,414,999 and the mean value is Kshs.18,089,600. The modal class covers 30 SACCOS and that is 60 per cent of all the societies surveyed. The table below shows the rest of the distribution.

Table 39: Loans Advanced to Members, 1986

Amount (Kshs.)	Frequency (Number of Societies)
113,799 - 8,414,999	30
8,415,000 - 16,716,200	6
16,716,201 - 25,017,400	5
25,017,401 - 33,318,600	5
33,318,601 - 41,619,800	0
41,619,801 and above	4
Total	50

Source: Own Survey.

There exists various types of loans. The first group of societies has two types of loans: - (i) Normal, and
(ii) Emergency - social loans

The next group has three types:-

- (i) Normal,
- (ii) School fees, and
- (iii) Emergency loans

The last group has also two types:-

- (i) Normal, and
- (ii) Emergency - School - fees loans.

The normal loans could be divided into provident and development types. The provident loans are given for purchases of luxurious items like furniture and Saloon cars. While development loans are those given for the purchases of land, houses, plots and for the construction of houses; both business and residential. School-fees loans are given for payment of school fees and the cheque is normally addressed and sent to school directly. But in the other types of loans the cheque

is addressed and sent to the loanee. The emergency loans are usually for purposes like:-

- (i) Settling hospital bills and Court fines, and
- (ii) Death and funeral expenses. Conditions for getting loans are given in appendix 7. For other purposes of getting loans, see the table below. The table also shows that the frequent purpose is school fees, followed by purchase of land/plots. The rest of the details can be seen in the table below:-

Table 40: Loan Purposes and their Frequency, 1986

Loan Purpose	Number of Managers who accepted that, that purpose is frequent in their society
1. School fees	44
2. Purchases of land/plots	42
3. Death and Funeral expenses	28
4. Sickness/Hospital bills	26
5. Construction and Improvement of plots, land and houses	26
6. Court fines	12
7. Building Purchases and House Deposits	11
8. Reconstruction of destroyed houses and farms	7
9. Farm machinery, implements and other forms of property purchases	5
10. Refinancing or additional loans	4
11. House-holds purchases	2
12. Marriage expenses	2
13. Purchase of bank shares and other stock exchange market shares	1

14. Settling of debts	1
15. Purchase of cars and other luxurious items	1

Source: Own Survey.

5.2.15: Problems of Societies

Several problems were identified by various managers and officials as affecting their societies. About 42 SACCOS identified loan defaults as one of the problems. Twenty six SACCOS were disatisfied with the supervisory co-operative officers from the Ministry of Co-operative development and alleged that there is need for intensive supervision and participation in the day-today running of these SACCOS by these ministry officials. The other problem was audit arrears. Seventeen SACCOS accepted to have had audit arrears in the past. The other problem is the non-remittance of members contribution by the employers. Fourteen SACCOS have had this problem in the past and 8 out of these societies had non-remitted funds totalling to Kshs.966,368. The next problem was division among committee members and 9 out of the 50 societies accepted that the problem exists in their societies. Due to shortage of funds and higher demand for loans, most societies were forced to defer loans and the figure there was 29 societies. Because of death or incapacity, 7 societies had loans of Kshs.535,831 written-off as bad debts. The rest of the societies did not term them bad debts because they had insured the loans hence they were paid by the Co-operative Insurance Services Limited Company.

5.2.16: Employment, Assistance and Management in SACCOS

The 50 SACCOS surveyed had employed a total of 383 people. The SACCOS with the highest number of employees was having 50. The lowest is 0, where the books are kept by the Treasurers. Among the 383 employees, only 53 are qualified co-operative managers, and these 53

covers only 33 SACCOS. Three of the 50 SACCOS are manned by unqualified personnel. Meaning that fourteen others do not have full-time employees but are ran by hired personnel.

Among the 53 qualified personnel, 30 have accountancy and degree qualifications. These 30 professionals cover only 18 SACCOS, while 18 are not covered and 14 lack full-time employees of professional qualifications. Among the 50 SACCOS surveyed, 47 had management committees of 12 members each. Two had management committees of 10 members each and 1 had a management committee of 8 members. Among the management teams, 182 of their members have accountancy and degree qualifications and they cover 43 SACCOS.

Table 41: Employment in SACCOS, 1986

Number of Employees	Frequency (Number of Societies)
0 - 3	32
4 - 6	5
7 - 9	3
10 -12	3
13 - and above	7
Total	50

Source: Own Survey.

From the above table, we notice that 32 out of 50 SACCOS employ between 0 and 3 employees, and that only 7 SACCOS have 13 and above employees.

Table 42: Professionals and the Management Committee

Number of Professionals	Frequency (Number of Societies with those members of professionals)
0	7
1	5
2	6

Number of Professionals	Frequency (Number of Societies with those number of professionals).
3	7
4	8
5	4
6	9
7	0
8	1
9	1
10	2
11	0
12	0
Total	50

Source: Own Survey.

In terms of assistance, most SACCOS received three types of assistance:-

- (i) Financial
- (ii) Free office accommodation and equipment, and
- (iii) Free qualified personnel in the form of book-keepers or accounts clerks.

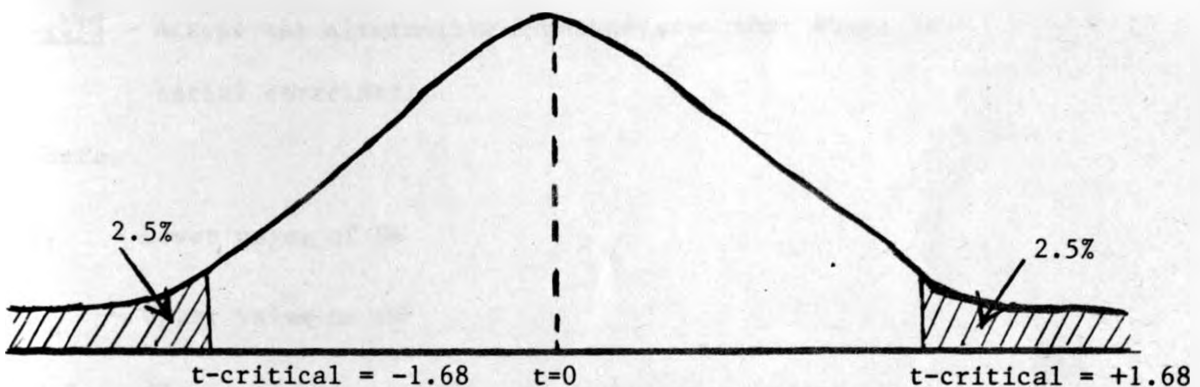
Eight SACCOS out of 50 received financial assistance from their mother organizations towards certain programmes e.g. co-operative day celebrations. The total amount of the financial assistance was Kshs. 1,273,504. However, no attempt was made to evaluate the extent of other types of assistance mentioned above.

5.3 ECONOMETRIC RESULTS

5.3.1 Introduction

Presented in this section are the results after applying the Ordinary Least Squares (OLS) and the Two Stage Least Squares (2SLS) on the models presented in chapter four. The test of hypotheses and other tests have been carried out at 95 per cent level of confidence with the t-critical values being -1.68 and $+1.68$ and a sample size of 50. Any variable with calculated t-value being either less than -1.68 or greater than $+1.68$ is regarded as significant hence plays a vital role in that function. That means that their calculated t-ratios lie in the shaded regions of the figure below.

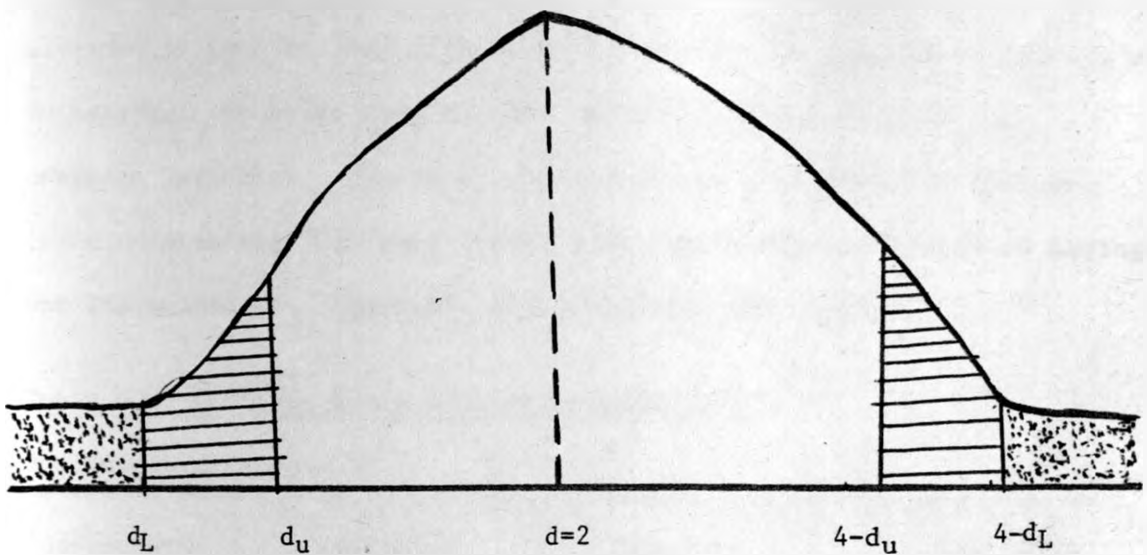
Figure 4: The t-distribution at 95 per cent level of Confidence and sample size of 50



Furthermore, regarding the coefficient of a variable as significant means rejecting the null hypothesis hence accepting the alternative hypothesis, that the coefficient is significantly different from zero. Other econometric results presented in the tables that follow have also been analysed using the relevant techniques.

The Durbin-Watson (DW) statistic was used to test for absence, presence of serial correlation or indecision. The procedures used are explained in the figure below and the sections 5.3.2 and 5.3.3.

Figure 5: The DW Distribution for testing serial correlation



Key

-  - Accept Null hypothesis:- that there is no serial correlation
-  - Indecision Region
-  - Accept the alternative hypothesis:- that there is serial correlation.

Where,

d_L - Lower value of DW

d_u - Upper value of DW

$d=2$ - Classical value of DW - No serial correlation.

The data used in obtaining the econometric results presented in this section are in appendixes 2 and 3.

5.3.2: OLS (SINGLE EQUATION) REGRESSION RESULTS

5.3.2.1 Savings Function (S)

In this function we had two endogenous variables, S and A and five purely explanatory variables, P, Iu, La, Ld and Lo. The variables profits (P) and Assets (A) were found to be positively correlated to

savings and were significant at the stipulated level of confidence. The other two variables, investment undertakings (Iu) and loans advanced to members (La) were also significant but negatively correlated to savings. From the results, both profits and assets were the dominant variables. The other two variables, loan defaults (Ld) and loans outstanding (Lo) were found to be positively correlated to savings but insignificant. The table below presents the results.

Table 43: Ordinary Least Squares Results, (S)

Dependent variable:- S

Independent Variable	Estimated Coefficient	Standard Error	T - Statistic
C (constant)	- 12.0784	98.5716	- 0.1225
A	0.0869	0.0105	8.3087
P	0.5104	0.0835	6.1122
Iu	- 0.7873	0.2326	- 3.3849
La	- 0.0252	0.0060	- 4.2181
Ld	0.2023	0.2621	0.7740
Lo	0.0011	0.0027	0.3914

$$R^2 = 0.8619 \text{ and } R^2 (\text{Adjusted}) = 0.8426$$

$$F - \text{Statistic (6143) (F)} = 44.7203$$

$$\text{Durbin-Watson Statistic (DW)} = 1.5651$$

$$\text{Sum of Squared Residuals (e}^2\text{)} = 0.118568 \text{ E} + 08$$

The DW calculated is 1.5651 and it is greater than 1.30 but less than 1.82 [the critical DW's at K = 6 (explanatory variables) and a sample (N) of 50] hence lying in the indecision region. Thus we cannot tell whether there exists autocorrelation or not. From the R^2 above, 84 per cent of changes in savings are explained by the variables

included in this function. The calculated F-statistic is 44 and it is greater than the F-critical (=3.77). This means that the difference between sample means is significant and that the population from which the samples are drawn do differ. This is true because all these variables listed above do differ significantly in the values and the sub-population. The sum of squared residual is very small and close to zero hence the disturbance variable can be assumed to be zero thus the variation in savings is all explained by the regression equation given above.

5.3.2.2 Assets Function (A)

This function also contains two endogenous variables, A and S and three pure explanatory variables, R, Shc, Lo. The variables savings (S) and share capital/deposits (Shc) were found to be significant and positively correlated to assets. The variable rate of return (R) was negatively correlated to assets and significant. The variable loan outstanding (Lo) was negative and insignificant.

Table 44: Ordinary Least Squares Results, (A)

Dependent variable:- A

Independent Variable	Estimated Coefficient	Standard Error	T-Statistic
C (constant)	2128.28	1295.27	1.6431
S	4.6191	0.8152	5.6663
R	- 6302.87	2373.74	- 2.6553
Shc	0.1712	0.0312	5.4812
Lo	- 0.0011	0.0270	- 0.0412

$$R^2 = 0.8793 \text{ and } R^2 (\text{Adjusted}) = 0.8686$$

$$F(4,45) = 81.9535$$

$$DW = 1.3566$$

$$e^2 = 0.137129 E + 10$$

The DW is 1.3566 and lies in the indecision region thus we cannot tell whether there is autocorrelation or not. The $R^2 = 0.8686$ hence about 87 per cent variation in assets is explained by the variables listed above. The F-statistic is 81.95 which is greater than the F-critical (= 5.7) hence the population from which the sample means are drawn are significantly different. The sum of squared residual is quite small hence the disturbance variable is insignificant thus the variation in assets is all explained by the regression equation specified earlier in chapter four.

5.3.2.3 The Share Capital/Deposits Function (Shc)

The two endogenous variables in this function are Shc and La, while the pure explanatory variables are M, Shc_(t-1), Dd_(t-1), Nb and AMCM. The variables, loans advanced to members (La), membership (M) lagged share capital (Shc_(t-1)) and Average monthly contribution per member (AMCM) were found to be positively correlated to share capital and significant. The variables lagged dividend (Dd_(t-1)), and number of branches (Nb) were also positively correlated to share capital but insignificant.

We also found that 99.9 per cent of the variation in share capital is explained by the variables included in the equation specified earlier. The calculated F-statistic (=21356) was found to be greater than the F-critical (=3.77) hence the population from which the samples were drawn did differ significantly. The DW was equal to 1.9560 thus lying in the acceptance region between 1.83 and 2.18 (K=6 and N=50) and therefore there is no serial correlation. But this test is not binding here because the DW test is usually not applicable to functions which do have lagged variables as explanatory variables. Thus the test is not applicable in this case because it will involve

the violation of one of the basic assumptions of carrying it out. The sum of squared residual is quite low hence the disturbance variable existing is not significant. Therefore, variation in share capital is all explained by the regression equation given below. (The table below gives the results analysed above).

Table 45:- Ordinary Least Squares Results, (Shc)

Dependent Variable	Estimated Coefficient	Standard Error	T - Statistic
C(constant)	- 1192.58	287.5440	- 4.1475
La	0.3293	0.0219	15.0440
M	0.3013	0.0561	5.3681
Shc(t-1)	0.9365	0.0180	52.1402
Dd(t-1)	0.2380	0.1938	1.2280
N _b	2.6624	2.7589	0.9650
AMCM	4.2808	1.5010	2.8519

$$R^2 = 0.9997 \text{ and } R^2 \text{ (Adjusted)} = 0.9996$$

$$F(6,43) = 21356.5$$

$$DW = 1.9560$$

$$e^2 = 0.445614 \text{ E}+08$$

5.3.2.4: The Loans Advanced to Members Function (La)

Here the pure explanatory variables are I_u , L_o and L_d . The endogenous variables are La and Shc . The results are that, both share capital (Shc) and loan defaults (L_d) have positive impact on loans advanced to members and they are significant. Investment undertakings (I_u) and Loan outstanding (L_o) have negative but significant impact.

The variables included in the function, Shc, Iu, and Ld explain 98 per cent of the variation in loans advanced to members. The calculated F-statistics is 665 and it is greater than the F-critical (=3.77) hence the population from which the samples were drawn differ significantly. The Durbin-Watson statistic is 1.77 which lies between 1.73 and 2.28 hence in the acceptance region. Thus we accept the null hypothesis that there is no serial correlation in this function. The sum of squared residual is low hence the disturbance variable existing is not significant. Thus variation in loans is all explained by the regression equation specified earlier. More details are given in the table below.

Table 46: Ordinary Least Squares Results (La)

Dependent Variable:- La

Independent Variable	Estimated Coefficient	Standard Error	T - Statistic
C (constant)	781.083	871.359	0.8964
Shc	0.7225	0.0250	28.9518
Iu	-6.2141	1.9659	-3.1610
Lo	-0.5822	0.0249	-2.3370
Ld	6.7474	2.3520	2.8689

$$R^2 = 0.9834 \text{ and } R^2 (\text{Adjusted}) = 0.9819$$

$$F(4,45) = 665.9$$

$$DW = 1.9560$$

$$e^2 = 0.102355 \text{ E}+10$$

5.3.3: 2SLS (SIMULTANEOUS EQUATION) REGRESSION RESULTS

5.3.3.1: Savings Function (S)

As stated earlier, variables A, P, Iu and La are significant. The assets (A) and profits (P) are positively correlated to savings while loans advanced to members (La) and investment undertakings (Iu) are negatively correlated to it. The loan defaults (Ld) and loan outstanding (Lo) are insignificant and positively correlated to savings as before. The R^2 has gone down to 83 per cent. The same applies to the F-Statistics but the result is as before. The DW has reduced to 1.488 but it still lies in the indecision region. Though low, the sum of residual squares has risen considerably. The t-statistics have reduced but the coefficients' significance has not changed except that the standard errors of the coefficients have risen. The two stage least squares (2SLS) results are in the table below.

Table 47: Two Stage Least Squares Regression Results (S)

Dependent Variable:- S

Instrumental variables:- R, Shc, Lo, P, Iu, La and Ld

Independent Variable	Estimated Coefficient	Standard Error	T - Statistic
C(constant)	108.7360	184.262	0.5901
A	0.0957	0.0302	3.1686
P	0.4873	0.0949	5.1344
Iu	-0.9248	0.3790	-2.4398
La	-0.0274	0.0094	-2.9305
Ld	0.0902	0.2964	0.3043
Lo	0.0006	0.0032	0.1793

$$R^2 = 0.8556 \text{ and } R^2(\text{Adjusted}) = 0.8355$$

$$F - \text{Statistic } (6,43) = 42.4735$$

$$DW = 1.4883$$

$$e^2 = 0.123935 \text{ E} + 08$$

5.3.3.2 Assets Function, (A)

The variables rate of return (R) and share capital (Shc) were found to be significant, with the former having negative coefficient and the latter positive coefficient. Both loan outstanding (Lo) and corporate savings (S) were found to have insignificant coefficients with the former being negative and the latter positive.

The DW has gone up to 1.7598 and it now lies in the acceptance region therefore we accept the null hypothesis that there is no serial correlation. About 82 per cent of the variation in assets is explained by the variables listed in this equation. The F-statistic is 57.70 which is greater than the F-critical hence the population from which the sample means were drawn were significantly different. The sum of squared residual is still low thus variation in assets is all explained by the regression equation specified earlier.

Comparing the 2SLS results and those of the OLS, we find that, the t-statistics of all the coefficients have reduced, standard errors have increased, some coefficients have risen while others have reduced, the R^2 has gone down. F-statistic has reduced and the DW has improved.

Table 48: Two Stage Least Squares Regression (A)

Results

Dependent Variable:- A

Instrumental Variables:- P, Iu, La, Ld, Lo, R and Shc

Independent Variable	Estimated Coefficient	Standard Errors	T - Statistic
C (constant)	4970.56	3278.50	1.5161
S	1.9565	1.5011	1.3034
R	-9595.24	4830.53	-1.9864
Shc	0.2123	0.0425	-5.0018
Lo	-0.0121	0.0332	-0.3656

$R^2 = 0.8368$ and R^2 (Adjusted) = 0.8223

F - Statistic (4,45) = 57.6989

DW = 1.7598

$e^2 = 0.185368 E + 10$

5.3.3.3: The Share - Capital/Deposits Function (Shc)

The variables La, M, Shc($t-1$) and AMCM are positively correlated to share capital and were all significant. The explanatory variables Dd($t-1$) and Nb were also positively correlated to share capital but were insignificant. The F-statistic is 57.7 and was found to be greater than the F-critical hence the population from which the samples were drawn did differ significantly. The DW is 2.2 hence lying in the indecision region thus we cannot tell whether there exist serial correlation or not, but as noted earlier this test is neither applicable nor binding in this case. The sum of squared residual is low hence the disturbance variable existing is insignificant thus the variation

in share capital is all explained by the regression equation given earlier.

Table 49: Two Stage Least Squares Regression Results (Shc)

Dependent Variable:- Shc

Instrumental Variables:- Iu, Lo, Ld, M, Shc(t-1) Dd(t-1), Nb and AMCM

Independent Variable	Estimated Coefficient	Standard Error	T - Statistic
C(constant)	-1799.03	1254.95	-1.4336
La	0.2254	0.0858	2.6279
M	0.4192	0.0933	4.4923
Shc(t-1)	1.0059	0.0615	16.3471
Dd(t-1)	0.1740	0.2937	0.5924
Nb	3.7661	3.8824	0.9701
AMCM	7.9153	4.7033	1.6830

$R^2 = 0.9995$ and R^2 (Adjusted) = 0.9994

F - Statistic (6,43) = 13114.7

DW = 2.2137

$e^2 = 0.725501 \text{ E}+08$

When we compare the OLS and the 2SLS results, we find that the standard errors have increased while the t-statistic has reduced. However, this is within the acceptable limits. The coefficients have had different changes. Some have reduced while others have increased. However, the basic results are the same except for the change in the DW, which has now brought us to the indecision region about the serial correlation.

5.3.3.4: The Loans Advanced to Members Function (La)

Both the share capital (Shc) and loan defaults (Ld) have significant coefficients and affect loans advanced to members (La) positively. While the investment undertakings (Iu) and loan outstanding (Lo) have negative though significant coefficients. All these variables explain 98 per cent of the variation in La. The F-statistic is 638.7 which is greater than F-critical (=3.77) hence the population differs significantly. The DW is 1.8 hence we accept the null hypothesis that there is no serial correlation. The sum of squared residual is low hence the variation in loans is all explained by the regression equation specified earlier. This is because the disturbance term is not significant. The results are shown in the table below.

Table 50: Two Stage Least Squares Regression Results (La)

Dependent Variable: La

Instrumental Variables: M, Shc(t-1), Dd(t-1), Nb, AMCM, Iu, Lo and Ld

Independent Variable	Estimated Coefficient	Standard Error	T - Statistic
C (constant)	1886.09	1102.12	1.7113
Shc	0.7051	0.0258	27.3330
Iu	-6.5036	2.0313	-3.2017
Lo	-0.0461	0.0255	-1.8021
Ld	5.2779	2.5332	2.0835

$R^2 = 0.9827$ and R^2 (Adjusted) = 0.9812

F - Statistic (4,45) = 638.7

DW = 1.8168

$e^2 = 0.106638 \text{ E}+10$

5.3.4 THE ECONOMETRIC RESULTS VERSUS THE HYPOTHESES

(i) It was confirmed that there is a positive relationship between profits and corporate savings. And that profit is one of the major determinants of corporate savings. This was confirmed using both the OLS and 2SLS.

(ii) It was also confirmed that membership and share capital/deposit are positively correlated. And that membership is one of its major determinants. Though lagged dividend had a positive coefficient it was found to be an insignificant determinant of share capital/deposits.

(iii) Lastly, it was confirmed that share capital/deposits is the major determinant of loans advanced to members and it has a positive coefficient.

5.3.5 OVERVIEW OF THE RESULTS:- THE CURRENT VERSUS PAST STUDIES

The current study has revealed that there exists audit arrears problem in Kenyan SACCOS. This has supported the results of past studies by the Ministry of Co-operative Development (1977) and Noormohammed (1986).

Secondly, profits, output or income has a positive effect on savings. The current study as well as past studies such as those by Furstenberg (1980), Rana (1987), Qureshi (1983), Harioka (1986) have concurred in this conclusion. Sandhu and Goswani (1986) found out that, besides income, the number of branches of a bank also positively determine the amount of its deposits. But it was not significant at 99 per cent level of confidence. The same result was found in this study regarding the number of branches of a SACCO and the amount of share capital, both tested at 95 per cent level of confidence.

It was also found in earlier studies, e.g. Oludimu (1982) that deposits and membership are positively and significantly correlated. This study has also confirmed that finding. Oludimu (1982) also found that share capital and loans given out are positively correlated. The same results was also found by the current study. Though most of the institutions studied in the earlier studies may be different from the currently studied institutions the basic economic theories still apply in general. A few results may appear different but the major hypotheses conform to major economic theories. This conclusion is supported by the fact that income was found to be positively and significantly correlated to savings. In this study, the profits of SACCOS was taken to be the income variable.

In summary, the main determinants of corporate savings are assets, profits, investment undertakings and loans advanced to members. The main determinants of deposits are loans, membership, average monthly contribution and lagged deposits or share capital. And finally, the main determinants of loans advanced to members include:- Share capital/ deposits, investment undertakings, loan outstanding and loan defaults. However, it should be noted that all these variables considered in this study are interlinked in one way or the other. Like-wise the policy implications that follow thereafter must consider those inter-linkages for any success.

CHAPTER SIX:-

POLICY IMPLICATIONS, LIMITATIONS OF THE STUDY, SUMMARY AND CONCLUSION

6.1 INTRODUCTION

This chapter presents the policy recommendations based on the results of this study and other implied results. The policies recommended here are further based on the major functions of this research presented in chapter four. The summary sub-section gives a summary of what is majorly contained in each of the five past chapters. It precisely tells us what we wanted to do, how we did it and what we found out. From the whole study, the major conclusions are also stated in this chapter.

6.2 POLICY IMPLICATIONS

The corporate savings as mentioned earlier is quite important for the development of this sector especially for investment purposes. From the results, the major factors that determine its magnitude are profits, investment undertakings, assets and loans advanced to members. Others include loan defaults and loan outstanding.

In order to reduce the demand (need) for corporate savings, we need to reduce the amount of loan defaults. This is because the two variables are positively correlated. And therefore the loanees and the loaners (management) must follow the laid-down regulations of giving out loans so as to prevent defaults (see appendix 7). The management must seal all the loopholes in loan repayment. Savings and Credit Co-operative Societies (SACCOS) in conjunction with the Ministry of Co-operative Development (MOCD) should intensify their pursuit for defaulters. However, incase of complete failure they can

resort to guarantors. Loans should be insured against defaults. Follow-ups to make sure that credits are properly utilized may reduce chances of defaults. Members need to be enlightened about the demerits of loan defaults so that they advance an attitude of repaying.

The profits of SACCOS need to be raised in order to boost the corporate savings. One way of doing that may be to employ qualified management so that the costs of running these institutions could be reduced and therefore profits raised. This may ensure increased SACCOS productivity. We need to train the co-operative leaders so that they acquire the needed management skills. Improved terms of service in SACCOS could attract qualified personnel thus improve the financial, accounting and audit systems of these societies. Such kind of personnel will be able to risk adopting policies and guidelines aimed at profitable investments.

In order to increase the current corporate savings, the societies need to reduce the amount of investment being undertaken now until such a time that the society is financially strong enough to undertake heavy investments. Increased demand for investment funds reduces the demand for corporate savings. Thus the policy of postponing unnecessary and unviable investment undertakings is recommended. Priority herein should be given to only projects which assist in the achievement of the objectives of SACCOS. For example, projects that will generate more loanable funds and increase personal savings of members should be undertaken, and not those that will discourage members from raising their monthly contributions.

As the society's assets increase, there is higher demand for corporate savings. This means that to raise the corporate savings,

the assets of the society must expand. This will need increased participation and motivation on the part of the members who can supply funds to acquire these assets. Secondly, in order to fasten this process, SACCOS must co-ordinate not only among themselves but with other business organizations like Industrial and Commercial Development Corporation (ICDC), Kenya Industrial Estates (KIE) and other financial institutions.

Loans advanced to members and corporate savings are negatively correlated hence reducing loans would reduce the demand for corporate savings. If the demand for loans is quite high then the corporate savings should be reduced by giving out the excess funds created as loans.

For more assets to be acquired, members need to be educated so that they are aware of the merits of not giving them as much loans as they need at the time in question but acquiring more assets instead.

The corporate savings increases as loan outstanding increases. Hence if we have the intention of increasing corporate savings, we should increase loan outstanding by either extending the payment period or reducing the monthly repayments. That kind of policy may also reduce loan defaulting as well. The profits of society will also rise since interest on loans will be charged over a longer period. We can also increase loan outstanding by raising the upper limit of loans given to members but maintaining the same amount of monthly repayment.

From the assets function, we realise that corporate savings and share-capital are the most important factors. Hence in order to increase the society's assets or the demand for assets or to improve on the diversification of the portfolio, the corporate savings must rise and this could be done as stipulated above. The loan outstanding need to be reduced in order to increase the assets of the society.

Hence if that were our objective, then there is need to reduce loan repayment period, increase the monthly repayment amount and reduce the upper limit of loans to members. However, this is not a significant factor at 95 per cent level of confidence as can be seen from the econometric results. From the results, societies with higher returns will tend to have less assets. Thus it is recommended that the ratio of profits to total assets should not be very high if we aim at improving the assets of the society. In any case very highly profitable societies tend to ignore their basic objectives of supplying loans to members thus stop operating as welfare organizations. The other important method which can be used to increase the assets of the society is to increase the share-capital/deposits.

The need to increase share-capital or increase the demand for it is one of the major objectives of both the SACCOS and this study. From the results, this can be achieved through increased membership, loans, dividends, number of branches of SACCOS and average monthly contribution per member. Hence there is need for co-operative education and active participation by the relevant agents especially the co-operative leadership, membership, the government and the apex organizations such as KUSCCO and KNFC. This will encourage non-members to join SACCOS and encourage members to raise their monthly contributions and therefore increase the deposits. There is thus a dire need for mass membership drive and education in this sector. It is also a policy-implication that loans taken by members be properly monitored so that they are used rightly. This would ensure better proceeds and hence encourage more members to come for more loans which would in turn increase the share-capital through interest charged (the two variables are positively related). Normally the interest charges are paid back to members in

the form of dividends and share bonuses and all these will increase the deposits of a society.

Just like most other researchers, we suggest that SACCOS in collaboration with KUSCCO, KNFC and MOCD should encourage their members both individually and as groups to invest the loans taken in viable enterprises so that repayment becomes easy and benefits are quickly reaped. This kind of process will require inter-society interaction, encouragement by the organizations listed above and increased regulation other than supervision (see also papers presented at the Follow-up workshop on the Role of Co-operatives in the Development of Kenya's Economy. Midwest Hotel, Kericho, March 28-March 31st, 1988).

Although the number of branches has an insignificant effect on share-capital, it can still be used to increase the deposits of societies especially in cases where other factors are ineffective or unacceptable. SACCOS should be encouraged to expand their branch networks. This should not however be done at the expense of the gains or benefits from economies of scale due to the existing branches. Though the t-statistic of lagged dividend was lower than the t-critical, the impact of this factor on deposits is not so small as indicated by the value of its t-statistic (see tables 45 and 49). Since lagged dividend and share-capital are positively correlated, there is need to give members dividends presently to have a higher level of share-capital in the future. Dividend acts as incentive to members, hence more members would join the SACCOS or the current members could raise their monthly contribution.

The last function which represent the loans given to members is also quite important. Infact one of the main objectives of SACCOS is

to give as much loans as possible and at minimum cost to its members. From the results, this can be done in several ways. First, it is noted that loans advanced mainly come from the share-capital/deposits. Hence in order to raise it or its demand, there is need to raise the share-capital as discussed above. The second method is by reducing the amount of funds being allocated to investment undertakings, especially investment on unviable projects so that funds are set free for loans. This will require full discussion and consultation between the members, MOCD, KUSCCO, KNFC and the SACCOS management. Thirdly, member need to be educated about the investment opportunities and constraints. And the above mentioned agents should assist both morally and materially so as to quicken the process, make it more effective and meaningful.

Loans advanced to members and loans outstanding are both negatively correlated. Therefore incase the objective is to increase loans being advanced to members, loan outstanding should be reduced. As mentioned earlier, this would call for reduced duration of loan repayment, increased monthly loan repayment and reduced upper loan limit. Another subsidiary important policy which has been used in the past is that one of increasing the multiplier of loans i.e. the number of times a loan given is equal to the member's deposits. Normally most loans vary from 2 to 4 times a member's deposits. We propose that the multiplier taken must consider the available funds, the laid down regulations, the loan applicant's income and the society's objectives among others (see appendix 7).

Briefly discussed below are some of the policies arising from the general statistical results presented in section 5.2 of chapter five. First, due to audit arrears the KNFC, KUSCCO, SACCOS themselves and the MOCD need to expand their audit staff, improve their financial status

through increased corporate savings to cope with the arrears and expand other training facilities. This will ensure proper budget preparation and book-keeping, production of annual reports and better financial management. Thus motivate the membership and potential members.

Bearing in mind that some of the societies were ran by officials without pay, there is need to pay them so that they are motivated to give their full service and work more efficiently. This will improve the profitability of the SACCOS ran on voluntary basis.

The types of loans identified from results varied from one society to the other. It is recommended that joint consultation be made so that the classification is standardized and made uniform. This will assist the upcoming SACCOS and the researchers in evaluating the performance of any SACCOS with respect to loans. Finally, of all the SACCOS, 50 was the highest number of employees recorded. However, since SACCOS have got a lot of potential to grow, there is need that they expand the number of their employees. This will ensure productivity while at the same time have a positive impact on the national employment.

6.3 LIMITATIONS OF THE STUDY AND RECOMMENDED AREAS FOR FURTHER RESEARCHES

Like any other studies in the social sciences, the methodology used is not free from econometric weaknesses. For example we could not get rid of multicollinearity problem completely because this would have led to a very insignificant study and specification bias. This is because very important variables would have been excluded from the functions simply because they are collinear. Secondly, the exclusion of these was tried in the preliminary estimations but some of the results

were highly contrary to economic theory and expected results. Hence this study could be suffering from some of the repercussions of either multicollinearity or serial correlation. However, we have tried to minimize that to acceptable degree even though it is difficult to define that acceptable degree.

The other possible major limitation of this study is that we never sub-divided our SACCOS into country-wide and Non-country-wide societies. Probably the behavioural results could have been different since the environmental conditions of operation may differ among the two groups of SACCOS.

Also as mentioned earlier, this study never addressed itself to the causes of the audit arrears and the problems of SACCOS. Lastly, for certain variables, proxies were used and this could have led to high standard errors of the estimates and regression. Due to these limitations, it is recommended that further studies should consider these weaknesses and eliminate them if possible. There is need to undertake a further study where members will be the units of analysis rather than the SACCOS as the case in this study. Lastly, there is also need for proper statistical results so that some new and appropriate policies could be recommended, not necessarily based on econometric results.

6.4 SUMMARY AND CONCLUSION

6.4.1 Summary

Chapter one of this study has given the historical back-ground of co-operatives. It has also defined the scope of this study, the statement of the problem, objectives of the study, justification and significance of this study and organization of the study. What the

study wanted to do was to find out the determinants of savings with a view to giving policy - recommendations which can help to boost the savings of this nation. The Kenyan savings is inadequate as can be seen in tables C, D and E of appendix 1.

Chapter two has reviewed the role played so far by the co-operative sector in Kenya especially with reference to gross domestic product (GDP), investment, farm revenue and employment creation. It has been observed that this is a very important sector in the Kenyan economy. The historical background of co-operatives in Kenya, its structure, operations, organization, distribution, performance, problems, past government policies towards the co-operative sector and the relationship of SACCOS to the Kenya financial sector has also been highlighted in this chapter.

Chapter three has reviewed both the theoretical and empirical literature which has formed the basis of this study and other studies that may follow there-after. One notable weakness of these past studies is in the methodologies, where single equation models have been used instead of simultaneous equation models. Thus they suffer from specification and simultaneity bias. But in studies where these biases have been eliminated, the studies have been too general hence not very useful for sectoral policies. From all these studies, savings and savings institutions are very important economic aspects and agents of/in any economy, Kenya inclusive.

Chapter four gives the theoretical framework, hypotheses and research methodology used in undertaking this study. It is a core chapter which has explained how we went about to find out what we wanted to do and how we did it. Both Ordinary Least Squares (OLS) and Two Stage Least Squares (simultaneous) were used to estimate the four

functions (corporate savings, assets, share-capital and Loans). More emphasis was placed on the latter methodology as it got rid of the earlier sighted weaknesses of past studies. The simple random sample method aided by a random number table was used to select the SACCOS surveyed. Cross-sectional data was used in the analysis.

Chapter five has presented the results of the study. It was found that, just like any other economic entity, SACCOS also follow the laid down economic theory rules in their daily operations. For example, savings is quite an important ingredient in achieving economic development. For any economic entity (e.g. a SACCOS) to raise its savings, the income level (in this case the profit) must be raised. And for loans and share-capital to rise, membership and monthly contribution need to be raised. Policies to do all those have already been suggested above.

6.4.2 Conclusion

The central position which SACCOS occupy in the Kenyan economy and more importantly in the co-operative movement has made and continues to make them the subject of interest of contemporary researches. The nation's economic welfare depends very much on how much savings are mobilised by these institutions and how efficiently these resources are utilized in the financial sector as a whole and in other lines of activity. Knowledge about the determinants of savings is therefore crucial because one objective of financial regulation is to mobilise savings, give loans and ensure efficient production and utilization. A study of this nature therefore can be viewed as a means of providing information which helps to shed light on possible policies which can facilitate savings mobilisation and loans expansion. Bearing in mind the high interest rate charged by banks and other Non-bank financial

institutions, it is our hope that members continue to exploit the relatively cheap loans offered by the SACCOS.

Obviously, the savings shortage is far from over. Formidable obstacles which are at once physical financial, political and attitudinal remains. Constructive new ideas and policies, nevertheless, are receiving attention and may show the way to an ultimate solution. Besides increasing income levels or reducing tax rates, which is an ever present possibility, new approaches to savings shortage problem have been proposed and are being adopted. SACCOS are new centers of focus. Above all, is the growing realization that the savings shortage problem is part of the larger problem of the national poverty. As most economists have pointed out, savings shortage problem and the national poverty will not be solved separately but together through the process of economic growth and development. In addition, much of the solutions must come from within the co-operative sector and not from outside. The adoption of the policies suggested would aid the improvement of SACCOS because these institutions do have a challenging future in the expanding of credits and savings mobilisation in this economy. However, these strategies cannot be implemented overnight.

In this paper, an attempt has been made to emphasize the importance of SACCOS in the savings mobilisation process in the co-operative movement and to find out the determinants of savings in this sector. The paper concludes that:-

- (1) To increase corporate savings or its demand, the SACCOS could increase their assets and profits. And also could make an attempt to decrease non-beneficial investment undertakings and excessive loans being advanced to members.

- (ii) To expand and diversify the assets and portfolio respectively, the SACCOS should increase their corporate savings, share-capital and attempt to reduce their loan outstanding.
- (iii) To expand their share-capital/deposits or to raise the demand for their shares, SACCOS should not only raise their loans to members, membership, number of branches but also the average monthly contribution per member. While at the same time pay out more dividend to create an incentive on the part of members.
- (iv) Finally, to expand the amount of loans advanced to members or to raise the demand for loans, SACCOS should expand their share-capital. While at the same time reduce their investment undertakings in unviable areas and minimize the loan outstanding in order to create excess loanable funds.

Inspite of the great effort put into this paper, it stands out just as an opener to greater depths that need research. As Owualah observes,

".....Against the background of the current paucity of more relevant or better information, it is instructive to reiterate that this paper is merely exploratory and opens a lot of opportunities to further work" (Owualah, 1986, pp 428)

F R N

(Further Research Needed)

APPENDIXES

APPENDIX 1

Table A:- Number of Societies and Membership in Selected African Countries, 1966/67

Country	Number of Societies	Membership	Year Recorded
Ghana	1382	207,000	1967
Kenya	1783	402,500	1967
Western Nigeria	2112	84,325	1967
Tanzania	1398	500,000	1967
Tunisia	779	206,633	1966
Uganda	1824	521,225	1967
Zambia	875	52,637	1967

Source, Hyden, 1973, pp 10

Table B:- Co-operative Membership as a percentage of total population in Selected Countries, 1967

Country	Percentage
Brazil	3.40
Denmark	46.31
Canada	29.92
India	10.41
Kenya	4.76
Mexico	0.89
Pakistan	1.39
Tanzania	3.99
Uganda	6.56
U.S.A.	19.13
U.S.S.R.	23.64

Source, Hyden, 1973, pp 12

Table C:- SACCOS Intended Investment and Corporate Savings,

(1986) (Kshs. Millions)

Society (a)	Investment (b)	Retained Earnings (c)	Statutory Reserves (d)	Cummulated Reserves (e)	Gap 1 b-c-d	Gap 2 b-e
Afya	12,755	1.383	1.213	11.633	10.159	1.122
Harambee	131.742	0.114	1.447	7.940	130.181	123.802
Ardhi	4.000	0.988	0.300	1.223	2.712	2.777
Mwalimu	8.000	0.0995	0.070	1.348	7.8305	6.652
Magereza	12.778	0.212	0.510	3.715	12.056	9.063
Ukulima	86.792	0.801	0.266	0.757	85.725	86.035
Tembo	30.000	0.080	0.021	0.627	29.899	29.375

Sources:- MOCD and Annual Financial Statements of SACCOS (Various)

Table D:- Investment and Savings as a per cent of GNP at Current Price, 1965 - 1984

	1965-69	1979-74	1975-79	1980-84
1. Gross Investment	19.7	25.4	23.9	25.6 →
2. Foreign Saving	3.2	7.5	7.9	9.5
3. Gross National Saving	<u>16.7</u>	<u>17.9</u>	<u>16.1</u>	<u>16.1</u> →
4. Private Saving	16.5	15.9	13.7	16.9
5. Government Saving	-0.2	2.0	2.4	-0.8
6. Gap (1-3)	3.0	7.5	7.8	9.5

Source:- Adopted from Sessional Paper, Number 1, 1986, pp 15.

Table E:- Kenya's Domestic Savings at Constant (1976) Prices
(Kshs. Millions), 1977 - 1985

Year	Savings	Growth Rate (%)
1977	441.33	-
1978	317.35	-28.11
1979	314.55	- 0.91
1980	438.59	39.41
1981	551.21	25.70
1982	478.45	-13.20
1983	661.54	38.30
1984	690.81	4.40
1985	619.20	-10.40

Source: Economic Survey (Various)

Table F:- SACCOS STATUS, 1980 - 1982

Year (a)	Active (b)	Dormant (c)	In Liquidation (d)	Total e	$\frac{(c+d)}{e}$ (%)
1980	723	35	29	787	8.13
1981	736	42	19	797	7.65
1982	847	58	22	927	8.63

Source:- Statistics For Co-operatives in Kenya (Various)

APPENDIX 2

LIST OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES SURVEYED

Society	Mother Organization(s)
1. Afya	Ministry of Health
2. Amref	African Medical Research Foundation
3. Archives	Kenya National Archives
4. Ardhi	Ministry of Lands and Settlement Schemes
5. ART	African Retail Trade Company Limited
6. Avon	Avon Rubber Company, East Africa
7. B.A.T.	British American Tobacco Company Limited
8. Bookies	Brighton Book-Makers and Company Limited
9. Bunge	The Kenya National Assembly
10. Cabrosta	Caspair Limited and Company
11. Caltex	Caltex Oil Kenya Limited
12. Coffee Workers	Kenya Planters Co-operative Union (KPCU) and Coffee Board of Kenya
13. Comoco	Cooper Motors Corporation, Kenya Limited
14. Dudu	International Centre of Insect Physiology and Entomology (ICIPE)
15. Elimu	Ministry of Education - Civil Servants
16. Energy	Ministry of Energy
17. Esso	Esso Company Limited, Kenya
18. Glaxo	Glaxo East Africa Limited
19. Hazina	Ministries of Finance and Planning
20. Huruma	Kenya Bus Services Company Limited
21. Intercon	Intercontinental Hotel, Nairobi Kenya
22. Irrigation	Kenya National Irrigation Board
23. Jumuiya	East African Community General Funds Services
24. Komars	Marryat and Scott Kenya Limited

25. Mater	Mater Hospital, Nairobi
26. Merdat	D.T. Dobie Company Limited
27. Mumaco	Musicraft MFG Kenya Limited
28. Mwalimu	Teachers Service Commission and the Secretariat
29. Nafaka	Kenya National Cereals and Produce Board (NCPB)
30. Nahiho	Nairobi Hilton Hotel
31. Nguvu	Ministry of Transport and Communication
32. Pan-African	Pan-African Insurance Company Limited
33. Pegasus	Kobil Company Limited
34. Peugeot	Marshalls Kenya Limited
35. Radio	Sanyo Armco Limited
36. Shauti	Ministry of Broadcasting and Information
37. Shelloyees	Kenya Shell Company Limited
38. Sheria	Department of Attorney General Chambers
39. Shirika	Ministry of Co-operative Development
40. Tembo	East African and Kenya Breweries Company Limited
41. Tiger	Tiger Shoe Company Limited
42. Tunajaribu	Kenya Rent A Car Company Limited
43. Ufanisi	Agricultural Finance Corporation
44. Ufundi	Ministry of Works, Housing and Physical Planning
45. Ukulima	Ministries of Agriculture, Livestock and Water Development
46. Ulinzi	Department of Defence - Civilian Employees
47. Utalii	Kenya Tourist Development Corporation
48. Viwanda	Kenya Industrial Estates Limited
49. Waajiri	Federation of Kenya Employers
50. Wanandeg	Kenya Airways Corporation

Source:- Own Survey

APPENDIX 3

DATA USED

S(Kshs)	P (Kshs)	A (Kshs)	I _u (Kshs)	Ld (Kshs)
1. 125,027	265,177	3,462,202	91,260	1,115,000
2. 220,422	220,010	1,725,299	12,700	310,263
3. 8,758,593	6,699,708	79,824,593	141,900	642,264
4. 387,734	1,299,196	3,982,767	126,770	1,095,153
5. 82,968	82,968	33,735,590	2,494,000	0
6. 2,601,230	2,706,912	41,425,439	57,250	541,541
7. 1,125,620	4,247,008	48,036,407	119,900	0
8. 83,872	200,456	1,034,752	270,500	0
9. 2,218,951	2,322,409	3,640,757	240,750	440,000
10. 1,328,346	3,249,333	2,680,233	74,150	100,105
11. 508,700	440,414	4,661,627	16,800	1,335,968
12. 509,966	1,270,155	4,614,712	159,600	0
13. 67,184	376,555	4,753,901	75,700	297,908
14. 613,154	1,200,413	9,345,259	165,900	721,000
15. 353,124	862,344	1,900,500	24,050	521,929
16. 1,910,062	7,428,562	11,215,225	239,300	545,700
17. 149,523	564,524	562,942	316,950	372,000
18. 118,744	459,563	597,129	538,433	0
19. 321,024	1,051,446	1,619,778	29,000	34,347
20. 702,077	2,229,764	6,151,815	35,800	0
21. 16,683	65,771	202,100	0	0
22. 31,995	81,995	724,003	18,300	193,896
23. 7,643	30,573	359,777	22,050	50,280
24. 64,031	64,031	136,857	0	0
25. 27,116	97,502	305,166	3,455	0
26. 22,801	57,471	2,463,711	84,810	48,000

S (Khs)	P (Kshs)	A (Kshs)	Iu (Kshs	Ld (Kshs)	
27.	119,335	288,060	2,917,244	6,940	357,457
28.	101,902	347,165	934,648	115,750	161,156
29.	52,479	52,479	96,175	139,000	246,961
30.	2,307	6,416	111,512	5,200	116,650
31.	15,529	15,529	130,300	0	0
32.	1,001,069	1,555,219	38,200,827	328,300	598,000
33.	199,161	714,795	552,314	116,600	3,000
34.	42,634	42,634	228,976	0	0
35.	65,388	226,460	306,508	2,500	7,000
36.	31,551	31,551	62,496	0	0
37.	12,460	49,786	64,128	50,000	590
38.	72,324	195,828	369,708	0	0
39.	15,538	15,538	95,528	0	10,790
40.	29,985	29,985	77,692	200	92,703
41.	16,827	56,573	266,703	1,500	25,786
42.	78,320	266,211	978,163	50	63,681
43.	12,879	33,390	149,071	1,750	0
44.	9,211	9,211	146,077	0	0
45.	99,070	298,745	735,968	7,450	85,318
46.	56,150	206,887	140,292	18,770	78,830
47.	98,161	168,000	289,923	29,350	50,000
48.	98,108	360,271	912,950	1,550	335,878
49.	193,556	193,559	1,396,398	111,600	169,376
50.	8,630	16,975	215,900	250	445

Where, S = Savings

P = Profits

A = Total Assets

Iu= Investment Undertakings

Ld= Loan defaults

Source: Own Survey

La (Kshs)	R (Ratio)	Ag(Years)	Shc(Kshs)	Shc(t-1) (Kshs)
1. 13,496,000	0.077	17.67	17,013,127	14,707,688
2. 2,509,357	0.128	9.30	4,951,659	4,239,834
3. 144,183,863	0.084	14.91	223,674,699	176,247,755
4. 20,000,000	0.326	14.82	28,958,726	21,464,799
5. 29,737,718	0.002	14.94	69,836,000	59,629,000
6. 27,302,983	0.065	9.53	34,989,060	30,397,875
7. 166,137,802	0.088	15.65	259,298,684	208,167,366
8. 10,394,637	0.194	15.90	12,869,290	10,939,766
9. 32,003,505	0.638	1.42	36,789,894	25,815,814
10. 29,111,360	1.212	15.51	38,253,328	32,341,913
11. 17,500,000	0.094	13.90	19,996,307	16,718,236
12. 14,081,201	0.275	14.01	17,705,634	14,134,603
13. 20,311,000	0.079	14.01	25,113,144	20,650,735
14. 32,000,000	0.128	15.24	51,373,364	40,160,622
15. 10,831,797	0.454	9.58	11,194,910	9,024,460
16. 83,545,715	0.662	14.20	98,162,980	66,175,629
17. 6,596,600	1.003	10.50	8,303,234	6,776,136
18. 3,743,000	0.770	12.24	6,065,255	5,069,978
19. 6,375,000	0.649	16.02	11,038,896	10,052,090
20. 17,928,910	0.362	11.61	23,269,840	18,946,440
21. 1,448,762	0.325	13.32	1,541,090	799,617
22. 3,484,600	0.113	16.23	5,070,049	4,173,401
23. 1,712,319	0.085	11.61	3,239,586	2,964,170
24. 1,283,574	0.468	5.36	1,305,748	893,626
25. 1,200,000	0.320	7.98	1,560,859	1,414,629
26. 15,289,624	0.023	17.37	19,596,151	17,000,392
27. 24,855,704	0.099	9.40	24,641,817	17,302,900
28. 2,763,450	0.371	15.67	4,080,880	3,276,434

La (Kshs)	R (Ratio)	Ag(Years)	Shc(Kshs)	Shc($t-1$) (Kshs)
29. 788,400	0.546	13.60	807,215	670,705
30. 1,257,860	0.058	8.97	1,745,915	1,520,133
31. 113,800	0.119	3.83	227,660	154,620
32. 121,864,709	0.041	12.19	144,478,971	105,190,883
33. 6,914,834	1.294	9.68	7,966,920	5,974,640
34. 564,125	0.186	6.53	867,504	660,460
35. 4,000,000	0.739	6.50	3,419,689	2,888,374
36. 377,400	0.505	4.94	475,540	390,060
37. 674,064	0.776	4.39	600,400	454,390
38. 1,597,918	0.530	4.54	1,673,260	1,409,959
39. 363,275	0.163	3.70	421,640	307,160
40. 569,500	0.386	6.69	609,882	485,242
41. 1,638,446	0.212	6.98	2,168,905	1,731,143
42. 2,398,631	0.272	6.99	2,890,959	240,794
43. 1,765,071	0.224	8.99	1,538,538	1,278,089
44. 178,000	0.063	3.78	284,260	224,960
45. 8,968,700	0.406	13.49	8,880,784	7,284,415
46. 2,561,648	1.475	11.93	2,726,848	2,462,278
47. 790,000	0.579	13.73	1,205,498	1,226,240
48. 3,893,093	0.395	12.23	4,261,227	3,386,057
49. 2,851,997	0.139	8.88	3,634,691	3,319,615
50. 520,917	0.079	8.64	680,042	489,200

Where, La = Loans advanced to members

R = Rate of return on Assets

Ag = Age of Society

Shc = Members Share Capital (deposits)

Shc($t-1$) = Lagged Share Capital

Source: Own Survey

M(Number)		Dd (Kshs)	Dd(t-1) (Kshs)	P/Shc(Ratio)
1.	2,406	101,813	122,588	0.0156
2.	928	89,981	0	0.0444
3.	37,948	1,709,150	792,932	0.0300
4.	5,076	1,661,470	993,443	0.0449
5.	3,345	4,774,028	4,523,102	0.0012
6.	2,154	1,484,078	1,208,700	0.0774
7.	34,281	2,399,670	1,622,300	0.0164
8.	746	90,736	70,941	0.0156
9.	8,641	1,426,347	1,321,360	0.0631
10.	3,953	1,837,936	1,325,985	0.0849
11.	3,569	142,907	87,450	0.0220
12.	2,485	885,108	706,899	0.0717
13.	2,885	186,709	183,106	0.0150
14.	10,163	1,095,837	632,825	0.0234
15.	1,369	495,696	446,135	0.0770
16.	26,929	5,300,000	3,500,000	0.0757
17.	1,119	378,817	254,000	0.0680
18.	294	30,149	26,811	0.0758
19.	1,200	830,820	639,387	0.0952
20.	1,381	1,672,323	1,517,245	0.0958
21.	169	49,088	20,049	0.0427
22.	477	50,000	239,739	0.0162
23.	178	1,384	0	0.0094
24.	209	0	13,083	0.0490
25.	104	70,386	104,117	0.0625
26.	2,885	1,616,855	1,190,027	0.0029
27.	3,052	168,154	0	0.0117
28.	340	245,263	141,598	0.0851

—	M(Number)	Dd(Kshs)	Dd($t-1$)(Kshs)	P/Shc(Ratio)
29.	160	0	0	0.0650
30.	223	1,709	11,856	0.0037
31.	21	11,293	5,148	0.0682
32.	12,364	463,650	409,000	0.0108
33.	356	483,637	300,028	0.0897
34.	154	0	12,073	0.0491
35.	457	161,072	117,960	0.0662
36.	42	0	0	0.0663
37.	121	4,505	28,728	0.0829
38.	99	127,000	90,000	0.1170
39.	83	0	0	0.0369
40.	233	0	0	0.0492
41.	272	39,746	49,136	0.0261
42.	390	187,892	134,430	0.0921
43.	262	299,936	38,360	0.0217
44.	49	0	0	0.0324
45.	1,121	199,662	145,544	0.0336
46.	182	150,837	134,050	0.0759
47.	172	68,279	16,586	0.1394
48.	423	252,335	145,196	0.0845
49.	444	11,118	129,128	0.0533
	121	6,568	19,568	0.0250

Where, M = Membership

Dd = Dividend

Dd($t-1$) = Lagged Dividend

P/Shc = Profitability Measure

Source: Own Survey

Nb (Number)		Lo (Kshs)	AMCM (Kshs)	Shw (Kshs)
1.	8	204,403,295	80	1,057,000
2.	6	4,193,094	64	202,380
3.	43	208,602,036	104	8,394,395
4.	384	30,065,625	123	300,000
5.	9	36,668,747	254	6,488,270
6.	7	32,219,175	178	2,478,150
7.	50	248,881,851	124	6,143,976
	12,	12,416,394	216	356,858
9.	32	36,862,553	106	838,424
10.	7	42,468,215	125	1,083,245
	15	21,077,564	77	589,318
12.	5	16,482,904	120	482,848
13.	8	23,600,115	129	300,000
14.	18	44,851,388	92	301,965
15.	10	11,087,293	132	311,873
16.	45	10,283,486	99	2,857,851
17.	20	8,609,796	114	383,522
18.	8	5,889,428	282	451,680
19.	11	11,929,222	69	254,000
20.	9	22,423,893	261	250,000
21.	1	1,448,762	366	80,249
22.	1	5,412,068	157	149,529
23.	8	5,262,411	129	415,284
24.	6	1,283,573	164	50,000
25.	1	154,992	117	0
26.	1	20,177,454	75	867,368
27.	50	24,855,704	200	399,969
28.	2	3,905,529	197	192,716

	Nb (Number)	Lo (Kshs)	AMCM (Kshs)	Shw (Kshs)
29.	4	1,057,898	71	36,000
30.	4	1,784,446	84	50,941
31.	2	129,102	290	20,000
32.	9	121,864,709	265	3,051,977
33.	4	9,038,499	466	204,260
34.	1	730,495	112	31,245
35.	30	3,720,462	97	60,000
36.	4	494,282	170	35,476
37.	4	702,976	101	34,361
38.	5	1,597,918	222	0
39.	3	362,275	115	1,980
40.	4	684,918	45	10,000
41.	3	1,988,353	134	114,286
42.	1	2,513,626	566	54,208
43.	1	1,765,071	83	9,000
44.	7	163,174	101	70,420
45.	1	8,968,704	119	347,537
46.	6	3,083,783	121	47,500
47.	2	1,160,731	120	87,610
48.	2	4,377,022	172	215,498
49.	4	2,851,997	59	70,218
50.	6	520,917	131	2,890

Where Nb = Number of SACCO branches/Representatives

Lo = Loans Outstanding

AMCM = Average monthly contribution per member

Shw = Share withdrawals (Refunds)

Source: Own Survey

APPENDIX 4: SUMMARY OF THE DESCRIPTIVE STATISTICAL RESULTS*

DISCUSSED IN SECTION 5.2

	Variable*	Mean	Variance	Standard Deviation
1.	S	495.783	1751920	1323.60
2.	P	855.111	2471100	1571.97
3.	A	6370.84	231854000	15226.7
4.	Iu	123.420	129103	359.309
5.	Ld	216.640	102224	319.725
6.	La	18089.6	1257310000	35458.5
7.	R	0.365620	0.118193	0.343792
8.	Ag	10.7820	18.1147	4.25614
9.	Shc	25029.2	2710950000	52066.8
10.	Shc(t-1)	19624.7	1663060000	40780.7
11.	M	3520.70	64700300	8043.65
12.	Dd	925.280	6354660	2520.85
13.	Dd(t-1)	469.433	749779	865.724
14.	P/Shc	0.0516320	0.00106664	0.0326595
15.	Nb	17.68	2957.81	54.3858
16.	Lo	25261.5	2905910000	53906.5
17.	AMCM	155.76	10266.5	101.324
18.	Shw	804.726	3011310	1735.31
19.	Shc-Shc(t-1)	5404.5	134518000	11598.2

Source: Own Survey

Note* This table was prepared on the basis of S, P, A, Iu, Ld, La, Shc, Shc(t-1), Dd, Dd_{t-1}, Lo and Shw being expressed in terms of Kshs '000. The rest as they appear in appendix 3.

Variable		Coefficient of Variation R^2	Highest Value (Kshs' 000)	Lowest Value (Kshs' 000)	Range (Kshs'000)
1.	S	2.66972	8758.59	2.31	8756.29
2.	P	1.83833	7428.56	6.42	7422.15
3.	A	2.39007	79824.59	62.50	79762.10
4.	Iu	2.91127	2494.00	0	2494.00
5.	Ld	1.47583	1335.97	0	1335.97
6.	La	1.96016	166137.80	113.80	166024.00
7.	R	0.940299	1.47	0.002	1.468
8.	Ag	0.394745	17.67	1.42	16.25
9.	Shc	2.08024	259298.68	227.66	259071.02
10.	Shc(t-1)	2.07803	208167.37	240.79	207926.58
11.	M	2.28467	37948	21	37927
12.	Dd	2.72441	5300	0	5300.00
13.	Dd(t-1)	1.84419	4523.10	0	4523.10
14.	P/Shc	0.632543	0.1170	0.0012	0.1158
15.	Nb	3.07612	384	1	383
16.	Lo	2.13394	248881.85	129.10	248752.75
17.	AMCM	0.650511	566	45	521
18.	Shw	2.15640	8394.40	0	8394.40
19.	Shc(t-1)	2.14602	51131.31	-207.4	-

Source: Own Survey

APPENDIX - SAMPLES OF MEMBERSHIP

APPLICATION FORMS

MEMBERSHIP APPLICATION AND REGISTER CARD.

(STRICTLY CONFIDENTIAL)

PART I

MEMBERSHIP NO.NAME. STAFF NO...

I hereby make application for membership and agree to confirm to the BY-LAWS or any amendments thereof in the WANANDEGE CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

Signature Date

Address

Birth Place Birth Date.....

Father's Name/Husband's Name

Approved by Managing Committee Min. No. Date.

Signature.....

.....

PART II

MEMBER'S NOMINEE

According to the By-Laws of this Society, I hereby nominate

My.....
(Relationship to you) (Full Names)

As the person to receive the monies standing to the credit of my share and deposit accounts in the said Society at my death, less any indebtedness owed by me to the Society.

Signature

Dated at This day of19....

Witnesses's Signature Staff No

Witnesses's Signature Staff No

ARDHI CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

1. APPLICATION FOR MEMBERSHIP

The Manager,
Ardhi Co-operative Savings and Credit Society Ltd.,
P.O. Box 28782,
NAIROBI
Telephone Nos. 802581/8022582

Date 19

I, the undersigned hereby apply for Membership of the above named Co-operative Savings and Credit Society and agree to conform to the Society's by-laws and rules. My particulars are as follows:

Full Name
Date of birth Date appointed
Official Designation Terms of service
Ministry Department
Personal No. Station
Present Address
Home Address
Length of Service ID/No.
Signature of applicant

2. AUTHORITY TO DEDUCT FROM SALARY

I authorize the Society to deduct the amount stated below from my salary and remit the sum to the Society. This instruction should remain in force until instructed otherwise by me.

Membership fee (K Shs. five once only)

K Shs.

Share contribution*.....

Signed Date 19

Data Section:-

Deduction effected from 19

Effected by (signs)

Designation

Registry Section:-

Date of Admission to Membership 19

Date of Membership Entered by Designation

Membership Register No.

Card issued on by (signs)

Designation

(to be perforated to confidential file)

NOMINATED NEXT OF KIN

3.

MEMBERSHIP PARTICULARS

Full Name
Ministry Department
Personal No. ID/No.
Official designation Terms of service
Present Address
Home Address

I, the undersigned, in the event of my death whilst a member of the Society, hereby instruct the Society to pay all amounts due to me, less any debt to the Society, to the personal/ persons named in this section irrespective of any will made by me. I understand that I may alter the name of the nominated next of kin only by special written instruction to the Society.

Nominated Next of Kin/ Kins full name

Relationship to applicant ID/No.

Address of Nominated Next of Kin/ Kins

Nominated next of Kin/ Kins full name

Relationship to applicant

Address of Nominated Next of Kin/ Kins

Signature of applicant

FOR SOCIETY USE ONLY

Membership Number allocated

Nominated Next of Kin/ Kins entered by Date 19

Checked by Registry Assistant Date 19

Confirmed by the Manager Date 19

Filed by Society Secretary Date 19

CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

1. APPLICATION FOR MEMBERSHIP

COMPLETE THIS FORM IN BLOCK CAPITAL

The Hon. Secretary,
P.O. Box _____

I hereby make an application for membership and agree to conform to the Societies By-Laws and any amendment thereof.

FULL NAME: MR. MRS. MISS _____
DATE OF BIRTH _____ OFFICIAL DESIGNATION _____
PAYROLL NO. _____ TERMS OF SERVICE _____
ID NO. _____ EMPLOYER _____
DATE _____ DEPARTMENT _____
STATION _____
PRESENT ADDRESS _____
HOME ADDRESS _____

SIGNATURE OF APPLICANT

2. NOMINATED NEXT OF KIN

I, the undersigned, in the event of my death whilst a Member of the Society, hereby instruct the society to pay all amounts due to me, less any debts to the society, to the person named in this section. The name of nominee can be given in a sealed letter. I understand that I may alter the name of the Nominated Next of Kin by filling in a subsequent Nominated Next of Kin form.

NOMINATED NEXT OF KIN (FULL NAME) _____

RELATIONSHIP TO THE APPLICANT _____ ID NO. _____

ADDRESS OF NEXT OF KIN _____

WITNESS: _____

SIGNATURE

SIGNATURE OF APPLICANT

NAME

3. FOR SOCIETY USE ONLY

1. DATE OF ADMISSION TO MEMBERSHIP _____ FIRST DEDUCTION DUE _____

MEMBERSHIP REGISTER NO. _____ RECORDED BY MANAGEMENT COMMITTEE _____

CHAIRMAN'S SIGNATURE _____ MINUTES NO./DATE _____

2. DATE OF WITHDRAWAL _____ DATE OF REFUND MANAGEMENT COMMITTEE _____

CHAIRMAN'S SIGNATURE _____ MINUTES NO./DATE _____

HAZINA SACCO SOCIETY LIMITED

HAZ/2/1

The Treasury,
P. O. Box 59877,
NAIROBI.

The Chairman,
Hazing Management Committee,
P. O. Box 59877,
NAIROBI.

APPLICATION FOR ENROLMENT MEMBERSHIP

I Mr/Mrs/Miss.....
apply to be considered for enrolment into the Hazing Co-operative
Savings and Credit Society Limited, with effect from.....
and attached herewith form for authority for salary deductions.
I agree to confirm the by-laws or any amendments therefore.

Signature.....

Date:.....

PERSONAL PARTICULARS:

FULL NAME.....

DESIGNATION.....

MINISTRY.....

DATE OF APPOINTMENT IN SERVICE.....

TERMS OF SERVICE.....

DEPARTMENT.....

HOME ADDRESS.....

PERSONAL NUMBER.....

DATE.....

STATION.....STATION ADDRESS.....

TELEPHONE NO.....EXT.....

FOR OFFICIAL USE ONLY

CHECKED BY.....SIGNATURE.....

DECISION.....

Signature.....

Date.....

APPENDIX :- SAMPLES OF DEDUCTION, CONTRIBUTION
VARIATION AND NEXT OF KIN FORMS

WANANDEGE CO-OPERATIVE SAVINGS & CREDIT SOCIETY LTD.

MEMBERSHIP NO.

VOLUNTARY ASSIGNMENT TO WANANDEGE CO-OPERATIVE SAVINGS & CREDIT
SOCIETY LTD.

I MR/MRS/MISS

STAFF NO:, HEREBY AUTHORIZE AND REQUEST YOU TO

DEDUCT FROM MY PAY, KSHS:

EFFECTIVE FROM: 1967 UNTIL

FURTHER NOTICE. THIS INSTRUCTION TO TERMINATE ONLY WITH KNOWLEDGE

AND WRITTEN APPROVAL OF CHAIRMAN/TREASURER OF THE SAID SOCIETY.

SIGNATURE:

DATE:

STAFF NO::

DEPARTMENT:

ARDHI CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

1. AUTHORITY FOR VARIATION OF DEDUCTIONS FROM THE SALARY OF A MEMBER

The Manager.
Ardhi Co-operative Savings and Credit Society Ltd.,
P.O. Box 28782.
NAIROBI
TEL: 802581/802582.

I (full name) hereby authorize the above named Society to cause my salary deduction to be changed in accordance with the instructions given below with effect from 19

My particulars are as follows:-

Personal number

Membership Number

Ministry Department

Present Address

(a) Share Contribution:

(b) Loan Deductions: 1st Development Loan

2nd Development Loan

School fees Loan

Emergency Loan

Change from Kshs.	To Kshs.

Signs Member Date 19

2. INSTRUCTIONS TO CHANGE PREVIOUS ADDRESS.

I hereby instruct you to change my previous address with immediate effect to my present address as herebelow:-

Full Name

Present Address

Personal No.

Membership No ID/No

Ministry Department

3. FOR OFFICIAL USE ONLY:

Data:

Change of deduction with effect from 19

Alterations processed by (name) (Sign)

Designation

Date 19

(b) REGISTRY:-

Change of address with effect from 19

by (name) (Sign)

Designation

Date 19

ARDHI CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

1. AUTHORITY FOR VARIATION OF DEDUCTIONS FROM THE SALARY OF A MEMBER

The Manager.

Ardhi Co-operative Savings and Credit Society Ltd.,

P.O. Box 28782.

NAIROBI

TEL: 802581/802582.

I (full name) hereby authorize the above named Society to cause my salary deduction to be changed in accordance with the instructions given below with effect from 19

My particulars are as follows:-

Personal number

Membership Number

Ministry Department

Present Address

(a) **Share Contribution:**

(b) **Loan Deductions:** 1st Development Loan
2nd Development Loan
School fees Loan
Emergency Loan

Change from Kshs.	To Kshs.

Signs Member Date 19

2. INSTRUCTIONS TO CHANGE PREVIOUS ADDRESS.

I hereby instruct you to change my previous address with immediate effect to my present address as herebelow:-

Full Name

Present Address

Personal No.

Membership No ID/No

Ministry Department

3. FOR OFFICIAL USE ONLY:

Data:

Change of deduction with effect from 19

Alterations processed by (name), (Sign)

Designation

Date 19

(b) **REGISTRY:-**

Change of address with effect from 19

by (name), (Sign)

Designation

Date 19

CONFIDENTIAL
ARDHI CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

The Manager
Ardhi Co-operative Savings and Credit Society Ltd..
P.O. Box 28782
NAIROBI
Tel. Nos. 802581 - 802582

Date 19

INSTRUCTIONS TO CHANGE NOMINATED NEXT OF KIN.

Full Name

Present Address

Personal No.

Membership No. ID/No.

Ministry Department

I, the above named hereby request and

require the Society to change my Nominated Next of Kin/Kins with immediate effect from

of P O Box

ID/No.

to my present Nominated Next to Kin/Kins as stated herebelow:-

1. Name

of P O Box

ID/No.

Relationship to Member

Special instructions

2. Name

of P O Box

ID/No.

Relationship to Member

Special instructions

3. Name

of P O Box

ID/No.

Relationship to Member

Special instructions

4. Name

of P O Box

ID/No.

Relationship to Member

Special instructions

and in the event of my death whilst a member, authorize the Society to pay all amounts due to me, less any debt to Society, to the person/persons now so nominated

Signs Member

FOR SOCIETY USE ONLY

Change of Nominated Next to Kin/Kins entered

Date 19

Processed by Registry Assistant

Confirmed by Manager Date 19

ARDHI CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

P O BOX 28762.
NAIROBI, Kenya
TEL 802581/802582

Nº .27199

REGISTRATION NUMBER

DATE

19

MEMBER'S LOAN APPLICATION FORM.

I Membership No Personal No ID/No

hereby request a loan of Kshs (figures)

..... (words) repayable in months.

My particulars are as follows:-

Ministry

Department Branch

Present Address

Purpose of Loan

Listed below are few of the basic rules extracted from the lending policy (inaugurated by the government) of which the loans to be granted shall be in accordance with :-

1. Members must have completed six months of contributions and have minimum share holding of Kshs. 600/- before they qualify for loans.
2. All loan(s) given to members shall be deducted monthly from their salary plus interest at 1 percent (%) per month on the diminishing balance of the loan and no member should be allowed to suffer deductions exceeding 2/3 of the basic monthly salary.
3. The total loan owed to the Society shall not exceed four times shares contributed
4. Unless the loan applied for is equal to or less than a member's share contribution, it must be guaranteed by at least two guarantors and the total shares of the borrower and those of the guarantors must be equal or more than the loan applied.
5. A second loan of the same type shall not be granted unless the first loan is cleared in full.
6. Loan application forms for school fees must be accompanied by school fees letter from the school in which the child is a student and cheques shall be written direct to school and repaid by 31st December of the same year.
7. Emergency loans shall only be granted on production of acceptable documentary evidence and paid within 12 months.
8. In the event of a member paying some cash or cheque to boost the share contribution, such a member shall be required to wait for six months before applying for any loan.
9. No member should belong to more than one Co-operative Savings and Credit Society at the same time.
10. Loans for Overseas Colleges will be treated as Normal loans and no priority shall be given to them.
11. Loan application forms shall be considered in the order in which they are received in the office apart from emergency cases only which will be given a priority.
12. The repayment period shall be determined by the Credit Committee but in all cases shall not exceed 48 months unless there is a written authority from the Commissioner for Co-operative Development.
13. Society will accept other securities for loans such as Share Certificates - Insurance Policy up-to surrender value and Mortgage in real estate (valuation of property and legal fees to be paid by the member).
14. A member withdrawing will be required to clear all outstanding loans and provide alternative guarantors in cases of loans guaranteed.
15. No member will be allowed to withdraw part of his/her shares or offset part of the shares against an outstanding loan unless he/she ceases to be a member completely.
16. All loans exceeding Kshs. 100,000/- shall be approved by the Commissioner for Co-operative Development.
17. Two most recent months payslips must be attached to the loan application form.

Authority for deduction from my salary

I hereby authorise the Society to deduct my salary to pay the amount of loans granted to me on monthly basis under the terms which the loan is given until it is cleared in full. Should I leave my employment before completion of repayment. I hereby authorise the balance to be deducted from my shares in the Society owned by me and also from my terminal benefits.

Loanee Signature Date

REPAYMENT GUARANTEE

We, the undersigned, hereby accept jointly and severally, liability for the repayment of the loan in the event of the borrower's default. We understand that the amount in default may be recovered by an offset against our shares in the Society or by attachment of our salaries or properties and that we shall not be eligible for loans unless the amount in default is equal to the shares owned by the defaulter.

GAURANTOR							
M/No	PAY ROLL NO	NAME	SHARES KSHS	LOANS KSHS	SIGNATURE	DATE	No. of Loans Guaranteed

WITNESS		
NAME	PAY ROLL NO	SIGNATURE

COMMENTS BY HEAD OF DEPARTMENT/SECTION

This applicant is years old and was employed on 19 The present designation is in the department/section of of Ministry /organisation stationed at and of which I am the Head. Subject to the rules and lending policy of the Society, I support this application and shall inform the Society should circumstances change or the loanee be transferred or discharged from the current employer.

I also declare that his/her terms of service is Permanent/Probation/Contract/Temporary.

Comments

.....

Name Signature

Designation (official stamp)

Date 19

PROVINCIAL COMMITTEE RECOMMENDATIONS

At the meeting of the Provincial Committee held on it was recommended that this application form be:-

- (a) Forwarded to Credit Committee in Head Office - Nairobi for consideration.
 (b) Rejected/Deferred/Returned to the member because of the following reasons:-

- (i)
 (ii)
 (iii)
 (iv)

Chairman Date 19
 Secretary Date 19
 Member Date 19

CREDIT OFFICE APPRAISAL

(a) Total Shares Kshs. (figures) (words)

Development loan Kshs.
 School Fees Loan Kshs.
 Emergency Loan Kshs.
 Defaulted Loan (Guaranteed) Kshs.
 Total Loans Kshs.
 Net Entitlement Kshs.
 Kshs.

(b) Basic Salary Kshs.
 Total Deductions Kshs.
 Net Salary Kshs.

Credit Secretary Date 19

MANAGER'S COMMENTS

This loan application form should be accepted/deferred/rejected for the amount of Kshs.
 payable in months.

If deferred/rejected, give reasons -

- (a)
 (b)
 (c)

Manager Date 19

CREDIT COMMITTEE

At the meeting of the Credit Committee held on 19
 it was resolved that this application be:-

- (a) Approved for Kshs. recoverable in months
 (b) Deferred because
 (c) Rejected because

Chairman Date 19
 Secretary Date 19
 Member Date 19

FOR OFFICIAL USE ONLY

ADMINISTRATION

Application received on 19
Guarantors checked by (name)
Signature Date
Rubber Stamp fixed by (name)
Signature Date
Guarantors signature verified by (name)
Signature Date

ACCOUNTS

Loan paid on cheque no.
Amount (figures) Kshs. (words)
.....
Cheque posted to (Address)
Cheque collected by (name)
Identity card No M/No
Signature Date
Cheque issued by Designation
Signature Date

DATA

Computer instructed to commence deduction from 19
at Kshs. per month.
Action taken by (name)
Designation Date

FORM MC 5

MWALIMU CO-OPERATIVE SAVINGS & CREDIT SOCIETY LIMITED

SOCIETY'S REGISTRATION NO. 2265

APPLICATION FOR LOAN IN THE MONTH OF _____ 19_____
(This form is to be completed after reading the notes on the last page)

CHOICE OF CO-OPERATIVE BANK BRANCH AND KENYA COMMERCIAL BANK (KAKAMEGA & NYERI) BRANCH ON WHICH CHEQUES SHOULD BE DRAWN

NAIROBI	MOMBASA	KISUMU	NAKURU	KISII	MERU	MACHAKOS	NYERI	KAKAMEGA

(Please tick in the space provided)

1. NAME _____
2. PRESENT ADDRESS _____
3. MEMBER NO. _____ 4. TSC/NO _____
5. EMPLOYER & ADDRESS _____
6. POSITION IN EMPLOYMENT _____
7. TERMS OF EMPLOYMENT (Specify if Temporary, Contract, Permanent & Pensionable or other) _____
8. NATIONALITY _____ AGE _____
9. OTHER INCOME (Wife's, Husband's, Investment etc) _____
10. COMMITTEE MEMBER/EMPLOYEE OF THE SOCIETY (Specify post held) _____
11. AMOUNT OF LOAN KSH. _____
(in words) _____
12. REPAYMENT PERIOD _____ MONTHS
13. PURPOSE/S OF THE LOAN _____
14. AMOUNT OF LOAN OUTSTANDING KSH. _____
15. ADDITIONAL SECURITY OTHER THAN SHARES AND GUARANTORS _____

.....
Attach the current payslip and photocopy of ID card (Both sides)

Read carefully page 4 for your information
.....

RETURN THIS FORM TO: MWALIMU CS & CS LTD. P.O. BOX 62641 NAIROBI TEL. 338233/
333699

I hereby declare that the foregoing particulars are true to the best of my knowledge and belief and agree to abide by the by-laws of the society, and the loan policy, and any variation by the Credit Committee in respect of items 12 - 13 above. I hereby authorise the necessary deductions to be made from my salary as repayment for this loan.

Signature.....Date.....

B.

G U A R A N T E E

(To be completed by the guarantors)

AMOUNT OF LOAN GUARANTEED: KSH. _____
(In words) _____

In consideration of granting the above loan or any lesser amount that may be approved, we the undersigned hereby accept jointly and severally liability for its repayment in even of borrower's default. We understand that the amount in default may be recovered by an offset against our shares in the society or by attachment of our property or salary, and that we shall not be eligible for loans unless the amount in default has been cleared in full.

<u>NAME</u>	<u>TSC/NO</u>	<u>ADDRESS</u>	<u>SIGNATURE</u>
-------------	---------------	----------------	------------------

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

C.(i)

FOR OFFICIAL USE ONLY - APPRAISAL

Loan No.....Total shares.....O/S Loan.....
Rate of recovery of O/S Loan.....Principal.....
Interest..... Loan entitlement.....Number of instalments
.....Principal.....Interest.....

Salary: Basic: Ksh.....
Less deductions (Including
instalment on loan applied for)
Net: Ksh.....

Names of defaulters guaranteed by the applicant:

C. (ii) Class of outstanding loan(s) _____

(FOR OFFICIAL USE ONLY)

NAME

SHARES

Prepared by: _____ Date: _____ Sign _____

D. MANAGER'S COMMENTS

This loan application should be accepted/rejected for the amount of

Ksh. _____ repayable in _____ months.

This loan application is rejected or amount requested reduced for the following reasons: _____

Signature _____ Date _____

E. CREDIT COMMITTEE

We have examined today the above application on conjunction with the above remarks and have decided as follows:-

(a) Loan Approved: Ksh. _____ Recoverable in _____ instalments.

(b) Deferred/rejected for the following reasons _____

Date _____ Credit Committee minute No. _____

Signature of Chairman _____ Member _____

Member _____

F. DISPATCH OF CHEQUE

(To be completed by the Manager)

1. Cheque NO. _____ Ksh. _____ Dated _____

2. Cheque hand delivered by _____ Date _____

3. Cheque posted on _____

4. Cheque registered NO. _____ Signature _____

Loans are granted in accordance with the loan policy, basic requirements of _____

1. Members shall have only one loan of each category.
2. The total loans granted shall not exceed four times a member's shares and payable for a period not exceeding four years but subject to the maximum of 5% of the society's capital and its liquidity. Members should confirm lending rate in force as it is likely to vary from time to time.
3. No member will be allowed to suffer total deductions including loan repayment in excess of two-thirds of his basic salary (where basic salary excludes house allowance).
4. Guarantors who must be members of the society shall not guarantee more than four loans and each loan must not exceed four times the guarantors shares.
5. The loan applied for should not be more than the total shares of a member and his/her guarantors.
6. Loan applicants for capital development (e.g. purchase of land, house etc) and emergency cases should be supported by documentary evidence.
7. Preference will be given to members who have no outstanding loans. Other members who qualify for consideration but have not cleared their loans will be considered after satisfying the members who have no outstanding loans.
8. To qualify for consideration, a member must have ^{cleared} / his/her loan in full.
9. Members must have been at least 6 months old in the society and should have saved at least 600/-.
10. Shares reduction after the loan is given should be as per the table below or higher.

LOAN GIVEN

MINIMUM CONTRIBUTION

Below 10,000/=	60/-
10,001 - 20,000/=	100/-
20,001 - 30,000/=	150/-
30,001 - 40,000/=	200/-
40,001 - 50,000/=	250/-
50,001 - 60,000/=	300/-
60,001 - 70,000/=	350/-
70,001 - 80,000/=	400/-
80,001 and above	500/-

11. Normal loans are considered by the Credit Committee, twice a month. Loan applications should be received before 10th for the mid-month consideration and 25th for the end of month consideration.
12. Any member who boosts his/her shares by cash must wait for six months before he/she qualifies for consideration.
13. Any member who clears his/her loan by cash must wait for two months before he/she qualifies for consideration.
14. Emergency loan shall be payable within 12 months and shall only be considered in the event of sickness, funeral or any other calamity that may have befallen a member. These must be supported by adequate documentary evidence.
15. School fees shall be sent to the schools demanding payment while loans on sickness will be sent to the hospitals concerned.
16. Non-Kenyans shall be granted loans equal to their shares.

CONFIDENTIAL

CS/NO. 1991

HAZINA CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

P.O. BOX 59877, NAIROBI.

LOAN APPLICATION & LOAN AGREEMENT FORM

LOAN NO.

DATE

A. PERSONAL INFORMATION

(To be completed by the applicant)

1. Member's Name
2. Member's Address
3. Personal No.
4. Telephone No. Ext.
5. Work Station
6. Employer and Mailing Address
7. Present Net Income per month Kshs.
8. Monthly Expenditure
9. Designation
10. Terms of Service - Permanent/Temporary/Contract/Pension
11. Position in Society - Committee/Member/Officer/Employer/Other - specify
12. Age according to ID/Card

B. LOAN APPLICATION & REPAYMENT

I hereby apply for a loan of KShs.
..... (amount in words)
for a period of months to be paid in instalments of
Kshs. each month commencing on

C. PURPOSE FOR WHICH LOAN IS APPLIED (in case of several uses of the loan, state the exact amount for each use)

1. Kshs.
2. Kshs.
3. Kshs.

D. SECURITY WHICH I OFFER FOR THE LOAN IS:

1.
2.
3.
4.

E. I hereby declare that the foregoing particulars are true to the best of my knowledge and belief and agree to abide by the by-laws of the Society, the loan policy, and any variations by the Credit Committee in respect of Section B above. I hereby authorize the necessary deductions, including one per cent interest monthly, to be made from salary as repayment for this loan. I declare that I am not indebted to any other Credit Society, bank or loan agency (except as listed herein) either as borrower or endoser.

SIGNATURE..... DATE.....

WITNESS SIGNATURE

NAME

ADDRESS

PAYROLL NO.....

F. REPAYMENT GUARANTEE *(To be completed by the guarantors)*

We, the undersigned, hereby accept jointly and severally liability for the repayment of the loan in the event of the borrower's default. We understand that the amount in default may be recovered by an offset against our shares in the Society or by attachment of our property or salary, and that we shall not be eligible for loans unless the amount in default has been cleared in full.

Guarantors

Personal No.	Name	Shares Kshs.	Loans Kshs	Existing guarantees		Signature	Witness Signatu & Personal No
				Kshs.	NO.		
TOTALS							

SharesX Minus Loan Minus Guarantees

Minus Loan Applied KShs. Result must be more than 0.

G. FOR OFFICIAL USE ONLY

Monthly contribution..... Total Shares Monthly repayment
..... Total Loan outstanding Kshs.
frequency Loans during the year..... Amount currently requested
.....

New Total Loans will be KShs..... Eligibility calculations
Shares Kshs.X Kshs.
Members present Net monthly income Kshs.....X 0.86.....
.....

Total monthly payment to society including payments on loans requested are Kshs.
.....(must not exceed amount above). The guarantors
cover the Loan amount yes/no.

I certify that the application is/is not within the Rules of the Society.

If not, say why
.....

Loans Officer Signature Date
.....

This loan should be accepted/rejected for the amount of Kshs.
..... repayable in

Secretary Manager Signature Date

H CREDIT COMMITTEE

Loan approved, Kshs..... recoverable in
instalments, at an interest of one per cent per month on a reducing balance with effect from

Current Loan applied for Kshs.

Previous Loan balance Kshs.

Amount due Kshs.

Indicate the reason for Deferred loan or Rejected loan by ticking the proper box.

Reasons for Deferred Loans

- ☐ 1. Incomplete information, of lack of supporting documents
- ☐ 2. Timelines
- ☐ 3. Renegotiate loan terms or purpose
- ☐ 4. Inadequate funds to meet loan demanded.

Reasons for Rejected Loans

- ☐ A. Inability to repay or bad repayment history
- ☐ B. Loan not in proportion to shares
- ☐ C. Clear outstanding loan
- ☐ D. Excessive loan frequency
- ☐ E. Lack of proper guarantors or security
- ☐ F. Membership period
- ☐ G. Ineligible purpose

Credit Committee minute No..... Date

Chairman Signature

Member's Signature

Member's Signature.....

DISPATCH OF THE CHEQUE

√(To be completed by the Manager)

1. Cheque No..... Shs..... Date

2. Cheque posted on

3. Cheque hand delivered by Date

4. Cheque received by

ID/NO.

Signature

.....
Treasurer

TEMBO CO-OPERATIVE SAVINGS & CREDIT SOCIETY LIMITED

APPLICATION FOR LOAN

LOAN REGISTER NO. _____

I, COMPANY NO:
OF UNIT.....Department
employed 19.....and joined Tembo CS & CS on
..... 19..... contribute \$..... per month
and have saved \$..... with Tembo. I hereby apply for a loan of
\$..... to be paid in months.

The reason for the loan is:

.....
.....

the security offered for this loan is:

- a) All my investment and savings with Tembo Co-operative Savings & Credit society Ltd.
- b) Authority to Tembo CS & CS for recovering from my wages, Salary and any other dues from Kenya Breweries Ltd.
- c) Personal guarantee of Mr/Mrs/Miss.....
and Mr/Mrs/Miss.....

-IMPORTANT

My previous loan record is as follows:-

	<u>LOAN AMOUNT</u>	<u>WHEN GIVEN</u>	<u>WHEN PAID</u>
1.	\$.....		
2.	\$.....		

Balance of \$..... is outstanding and repayable in full on
..... 19.....

I am not indebted to any other society, bank or loan agency, bank agency
either as borrower or endorser. The statement herein is made the
purpose of obtaining loan is true to the best of my knowledge.

Date this day of 19.....
Signature of applicant.....

REPAYMENT GUARANTEE

In case of any default in repayment as herein agreed, the entire loan balance
becomes immediately due and repayable to Tembo CS & CS Ltd. We hereby pledge all
paid up shares we now have or hereafter may have in the said society as security
and we authorise the Society to apply any or all shares and other payment on
account of shares/deposits towards loan, interest costs and any other recovery
expenses.

COY NO Member's Signature
Coy No Surety
Coy No Surety

FOR OFFICE USE ONLY.

1. Total Contribution with Society: \$ _____
2. Loan rejected for the following reason:
- A. Outstanding Loan
- B. Insufficient Security
- C. Too new a Member
- D. Form Incomplete
- E. Non-Member Guarantor
- F. _____
3. Loan Application Approved for \$ _____
4. OFFICER'S SIGNATURE _____
- CHAIRMAN/VICE CHAIRMAN _____
- TREASURER _____
- SECRETARY _____
- DATE _____
- COMMITTEE MEMBER _____



APPENDIX 8:- A SAMPLE OF FINANCIAL STATEMENT
AND BALANCE SHEET.

TEMBO CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD

BALANCE SHEET
31ST DECEMBER 1986

	Note	1986 Sh	1985 Sh
LOANS TO MEMBERS		36,668,747	29,405,804
FURNITURE AND EQUIPMENT	2	20	20
INVESTMENTS	3	2,494,000	2,494,000
LOAN	4	5,357,148	7,500,004
CURRENT ASSETS			
Loan receivable within one year	4	2,142,856	2,142,856
Debtors	5	3,330,469	2,914,180
Short term deposits		26,789,781	22,802,682
Bank savings account		22,080	20,007
Bank current accounts		1,424,680	1,466,364
		33,709,866	29,346,389
CURRENT LIABILITIES			
Creditors and accrued charges		5,933,909	5,785,703
Taxation	10	1,755,371	1,712,631
		7,689,280	7,498,334
NET CURRENT ASSETS		26,020,586	21,843,055
		70,540,501	60,247,883
Financed by:			
SHARE CAPITAL	6	6,222,000	5,613,000
STATUTORY RESERVE	7	624,504	600,627
RETAINED SURPLUS		80,207	17,931
SHAREHOLDERS' FUNDS		6,929,711	6,234,668
MEMBERS' DEPOSITS		63,613,790	54,013,215
		70,540,501	60,247,883

The accounts on pages 12 to 18 were approved by the managing committee on 27th May 1987 and were signed on its behalf by:

S.N. MBURU – Chairman

P.M. KARUGUTU – Treasurer

J.N. MUHOHO (MRS) – Secretary



TEMBO CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LIMITED

APPROPRIATION ACCOUNT
FOR THE YEAR ENDED 31ST DECEMBER 1986

	Note	1986 Sh	1985 Sh
SURPLUS BEFORE TAXATION	3	1,825,254	1,721,298
TAXATION	3	<u>1,742,286</u>	<u>1,700,300</u>
SURPLUS AFTER TAXATION		82,968	20,998
TRANSFER TO STATUTORY RESERVE		<u>20,742</u>	<u>5,247</u>
SURPLUS FOR THE YEAR		62,226	15,741
RETAINED SURPLUS BROUGHT FORWARD		<u>17,981</u>	<u>2,240</u>
RETAINED SURPLUS CARRIED FORWARD		<u>80,207</u>	<u>17,981</u>



TEMBO CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LIMITED

STATEMENT OF SOURCE AND APPLICATION OF FUNDS
FOR THE YEAR ENDED 31ST DECEMBER 1986

	1986 Sh	1985 Sh
SOURCE OF FUNDS		
Surplus for the year before taxation	1,825,254	1,721,288
Funds from other sources:		
Issue of shares	606,000	324,000
Deposits by members (net of withdrawals)	9,600,575	6,005,235
Loan repayment	2,142,856	2,142,356
Entrance fees received	3,075	2,535
	<u>14,177,730</u>	<u>10,195,914</u>
APPLICATION OF FUNDS		
Loans to members (net of repayment)	8,262,943	2,722,252
Taxation paid	<u>1,699,546</u>	<u>57,943</u>
	<u>9,962,489</u>	<u>2,780,195</u>
NET SOURCE OF FUNDS	<u>4,215,271</u>	<u>7,415,719</u>
REPRESENTED BY:		
MOVEMENT IN WORKING CAPITAL		
Debtors	416,289	(396,782)
Short term deposits	3,987,099	8,356,639
Creditors	<u>(148,206)</u>	<u>216,427</u>
	<u>4,255,182</u>	<u>8,176,294</u>
Movement in liquid funds:		
Bank savings account	2,073	1,912
Bank current accounts	<u>(41,984)</u>	<u>(762,477)</u>
Net movement in working capital	<u>4,215,271</u>	<u>7,415,719</u>



TEMBO CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD.

**NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST DECEMBER 1986**

1. ACCOUNTING POLICIES

(a) BASIS OF ACCOUNTING

The accounts are prepared on the historical cost basis of accounting.

(b) MEMBERS' DEPOSITS

The shareholding of each member is limited to 100 shares of Sh 20 each. Excess contributions are credited to members' deposit accounts on which interest and rebate are paid or credited at the discretion of the managing committee.

(c) DEPRECIATION

Depreciation is calculated to write off the cost of furniture and equipment in equal annual instalments at 12½% per annum.

2. FURNITURE AND EQUIPMENT

1986
Sh

COST

At 31st December 1985 and 1986

25,744

DEPRECIATION

At 31st December 1985 and 1986

25,724

NET BOOK VALUE

At 31st December 1985 and 1986

20

All fixed assets have been written down to a nominal value. The normal annual depreciation charge is Sh 3,218.

NOTES TO THE ACCOUNTS (Continued)

	1986 Sh	1985 Sh
3. INVESTMENTS		
30,214 (1985 - 28,920) shares of Sh 100 each in The Co-operative Bank of Kenya Limited - at cost	2,493,900	2,493,900
Affiliation shares in Kenya Union of Savings and Credit Co-operative Limited - at cost	<u>100</u>	<u>100</u>
	<u>2,494,000</u>	<u>2,494,000</u>
In the opinion of the managing committee, the investments are worth at least their cost.		
4. LOAN	1986 Sh	1985 Sh
Loan to Kenya Breweries Limited secured by legal charges over the Kisumu staff housing project	7,500,004	9,642,850
Less receivable within one year	<u>2,142,856</u>	<u>2,142,856</u>
	<u>5,357,148</u>	<u>7,500,004</u>
5. DEBTORS		
Debtors include Sh 410,219 (1985 - Sh 353,511) representing payments made on behalf of members in respect of Kasarani plots.		
6. SHARE CAPITAL	1986 Sh	1985 Sh
Authorised: An undetermined number of shares of Sh 20 each		
Issued and fully paid: 311,100 (1985 - 280,000) shares of Sh 20 each	<u>6,222,000</u>	<u>5,613,000</u>

NOTES TO THE ACCOUNTS (Continued)

	Reserve Sh	Entrance fees Sh	Total Sh
7. STATUTORY RESERVE			
At 1st January 1986	573,557	27,130	600,687
Transferred from appropriation account	20,742	—	20,742
Receipts during the year	—	3,075	3,075
At 31st December 1986	<u>594,299</u>	<u>30,205</u>	<u>624,504</u>
8. SURPLUS BEFORE TAXATION		1986 Sh	1985 Sh
The surplus before taxation is arrived at after crediting:			
Interest from members		3,530,746	3,047,837
Other interest		<u>4,702,466</u>	<u>4,445,230</u>
and after charging:			
Interest to members		3,170,205	3,183,907
Bonus to members		248,880	224,640
Rebate to members		<u>1,354,943</u>	<u>1,114,555</u>
		<u>4,774,028</u>	<u>4,523,102</u>
Management fees		530,504	370,000
Managing committee —			
Sitting allowance		28,800	28,400
Bonuses		82,495	35,200
Honoraria		60,000	60,000
Auditors' remuneration		70,000	80,000
Supervision fees		7,000	8,250
Donations		<u>25,800</u>	<u>22,000</u>

NOTES TO THE ACCOUNTS (Continued)

9. TAXATION	1986 Sh	1985 Sh
On the adjusted surplus for the year at 45%	1,798,693	1,700,300
Over provision in prior years	(56,407)	-
	<u>1,742,286</u>	<u>1,700,300</u>

10. CONTINGENT LIABILITY

The Income Tax Department has issued amended assessments for the years 1978 and 1979 and tax plus interest amounting to Sh 206,289 is in dispute. The Society has appealed to the High Court against both assessments. In addition the Income Tax Department has issued assessments in respect of the years 1980 to 1984 and tax plus interest amounting to Sh 5,146,159 is in dispute. The Society has appealed against all the five assessments. No provision has been made in the accounts in respect of the disputed amounts because, in the opinion of the managing committee, the final outcome of the appeals will be in the Society's favour.

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